INDUSTRY

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OPENING DOORS TO THE UNKNOWN

Page 6

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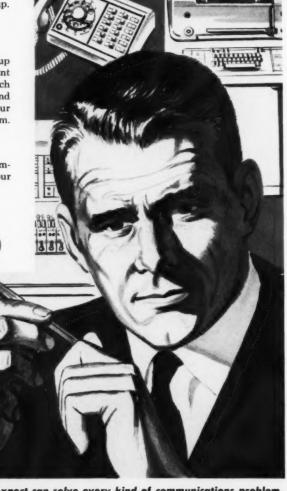
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# CONNECTICUT

FEBRUARY . 1961

**VOLUME 39 NUMBER 2** 

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THIS MONTH'S cover photo shows Technician Norman K. Channin, Quantum, Inc., Wallingford, conducting test using tensile testing machine. Adhesive devised by the company for U. S. Navy holds pipe together at center of tubing while brazed pipe-to-coupling-joint breaks.

LESLIE M. BINGHAM ..... Editor

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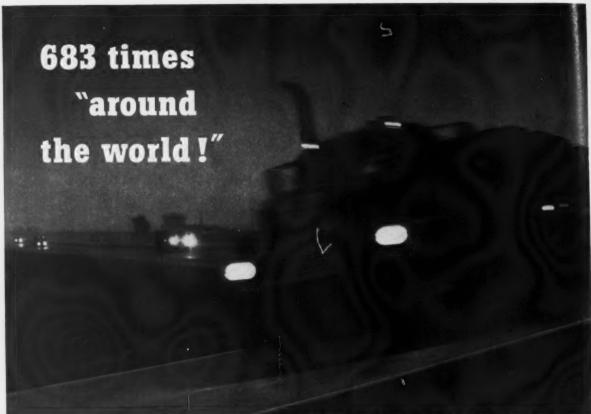
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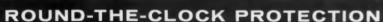


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### The Coming Climax

By DAVID LAWRENCE, Editor
U. S. News & World Report

• THE cycle of events that inevitably precedes a war is beginning to emerge.

The free world is tormented by a desire to pay almost any price to avoid a catastrophe. Yet bitter experience tells us that this is the very thing that can plunge us into bloody conflict.

We are being threatened today in every continent of the world.

Soviet imperialism is subverting government after government — in Latin America, in Africa, in Asia, and in Europe.

Even in our own country, there are some misguided newspaper editors, some misguided businessmen and some misguided intellectuals who pooh-pooh the menace. They raise smokescreens about the need for trade or to defend Communist activity as a right of "free speech."

It was Judge Learned Hand who, in a famous decision, said that free speech does not include the right to cry "Fire!" in a crowded theater. Nor is there in our Constitution any guarantee of protection for a Communist Party which organizes demonstrations and tries to infiltrate the churches and the colleges, the radio and the press — all at the behest of an enemy government.

This technique of infiltration is being applied throughout the free world — in Britain and in France and in Italy, as well as in North America.

When will we wake up to the fact that we are engaged in a world war — Communist style?

We call it a "cold war" as if this makes it remote from a "hot war" and hence a mere routine of modern diplomacy.

The tragic story of what is happening in Latin America is revealed in the article on page 60 of the January 9 issue of U.S. News & World Report. No country in this hemisphere apparently is free from the Soviet invasion.

We have placed our hopes in the Organization of American States, but its members are themselves weak because their own governments are threatened from within by Communist-inspired opposition.

We read of the troubles in Laos and in the Congo, and we are misled into believing that they are just part of the process of evolution from colonialism to independence. But the truth is that Western democracies are being fooled by the argument that all that's needed is economic help to remove poverty and illiteracy.

Something sinister has been introduced which must be faced squarely if the holocaust is to be averted.

The simple fact is that the Soviet Union, which spends billions of dollars annually on the "cold war," is convinced that the free world will not fight — that its alliances are weak and that it is disunited. That's what Hitler, too, believed, especially after the "summit" conference at Munich in 1938.

Every day there are signs that the Munich philosophy of appeasement pervades many of the free governments. Why should Moscow change its policy if it can make headway toward complete conquest by "peacefully" taking over government after government?

Nikita Khrushchev rants against "colonialism," but hypocritically maintains a system of tyranny that has made colonies for the Soviets out of several countries in Eastern Europe which once enjoyed independence,

What shall the free world do about all this? Shall it continue to hand out hundreds of millions of dollars every year and have no real voice in what happens to those funds? The propaganda against making grants with "strings" attached is of Soviet origin. So is the much-vaunted "neutralism," the whole object of which has been to put strings on America's policies and to prevent us from making our funds effective.

The time has come to stop fooling ourselves.

Not a dollar of "foreign aid" ought to be appropriated for use by any government which tolerates Communist agents or intrigue or a political party with affiliations in Moscow or Peiping.

If the countries which we are to help will rid themselves of Communist influence, we can support them to a certain extent, but we must not be expected to do that job alone. The nations aided must show some signs of a capacity to establish and maintain their own independence and self-governing system.

A showdown in Latin America is due.

The Monroe Doctrine warned European governments in 1823 to stay out of this hemisphere. It is still a valid doctrine today.

The Soviets have established a base in Cuba and are invading other Latin-American countries.

A warning should be issued to the Soviet Government to get its agents, spy rings and munitions depots out of Latin America.

If necessary, an armed blockade must be imposed — as was done recently along the coasts of Nicaragua and Guatemala — to enforce our position. Unless we show we are ready to fight, there will be no peace in the world.

The Soviets can't afford a war. They are bluffing. It is time to call their bluff, or soon we will face a tragic climax — the big war.

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Polyethyl

coating i



Officers of Quantum, Inc. look over new products created in the laboratories through research. Left to right, Arnold Pfenninger, vice president, engineering; Dr. D. R. Doede, treasurer, Dr. C. M. Doede, president. A. D. Thomas, not present, is secretary.

# Opening Doors to the U

By LAWRENCE C. NIZZA



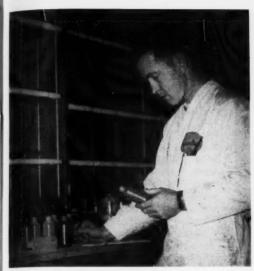
Human eye parts made of silicone rubber are examined by technician James A. Lockert. Quantum worked in cooperation with surgeons and medical specialists to develop product used in detached retina operations.

From a barn-like single-purpose laboratory in 1948, to one of the leading independent research laboratories working in four basic areas in 1960, stretches a near-magic carpet of progress at Quantum, Inc., of Wallingford.

♦ TODAY we live in a wonderful and awesome world. Never before has man been privileged to witness so much so soon. Look back only five years; review the marvels that science and technology have wrought. Satellites are orbiting the earth, sending back photographs and other vital information for man's understanding and eventual entry into space. We saw a glimpse of the moon's other face. We visited the North Pole by an underwater route. We were given a polio vaccine. We can look forward to a life expectancy of 70 years. Important breakthroughs are being achieved in heart and cancer diseases.

#### Some Benefits of Scientific Research

Daily, we benefit in countless ways from new electronic, mechanical, plastic, rubber, and other products born in the realm of ideas, created and made feasible through research and



Polyethylene bottles conduct electricity through thin copper coating in interior or on exterior. Metal does not detract from pliability. The process developed by Quantum has applications for the electronics and chemical processing industries. Richard F. Horan, staff scientist, makes notes during experiment.

# Unknown



Staff scientist, Robert M. Reihsmann, checks vacuum distillation apparatus used for purification of organic compounds.

development. This vast parade of continuing progress started with the atomic age when a uranium atom was split and nuclear energy released.

"During World War II scientists proved to industry what could be achieved with suitable financing and facilities. Research has given industry much of what it desired. Research helped develop new products, improved old ones, and assisted companies to diversify. It is revealing to note that 75% of total sales volume today stems from products developed within the last decade," observes Dr. C. M. Doede, President of Quantum, Incorporated, an independent research and development laboratory in Wallingford, Connecticut.

The very existence of Quantum, Inc., testifies to the need by both government agencies and private industries for research facilities to gain pertinent knowledge into new realms of human endeavor. And Quantum has played a meaningful role in this intriguing and challenging drama. The firm was established in 1948, in Cheshire, Connecticut by (Mrs.) Dr. D. R. Doede, wife of President Doede. "We started in a barn-like structure with a 4,000 sq. foot area and a chemical laboratory," reminisces Mrs. Doede.

At that time, Quantum was engaged in biological work, testing new products for dietary and toxicity qualities. Barns are not unusual beginnings for researchers. Many famed scientists and inventors produced their most useful products in barns. The concern adopted the name Quantum (after the Quantum theory) because it foresaw the application of atomic energy in industrial processes and materials. Indeed, scientists have utilized the atoms to create molecules of synthetic drugs, space rocket fuels, transistors and other products, Through atomic tracers, they probed into some of the mysteries of life's basic processes. By understanding nuclear transformations researchers have calculated the sun's and stars' powers and tracked their evolution.

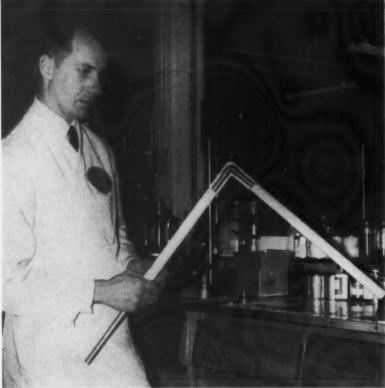
#### The First Eight Years

Quantum's slogan is an appropriate one—"Research our business, progress our product." During the first eight years (1948-1956) the research firm performed a variety of services for government agencies. For the Air Force, it undertook a fundamental study of adhesives. It searched for answers to such questions as, "What

makes glue stick?" "Under what temperature and atmospheric conditions will certain adhesives bind?" "How much stress and strain can be withstood before ruptures occur?" Research in this field resulted in various product developments. Several glues were devised that worked effectively at 600° F. and 1000°F. Also, a standard radiometer was developed to measure the intensity of radiant energy.

The U. S. Navy Bureau of Ships retained Quantum to study the feasibility of utilizing adhesives for bonding pipes on ships. The firm came up with an adhesive now being tested by the Navy. The bonding is said to be stronger than the pipes. If successful, it will eliminate soldering and brazing, and the Navy will realize considerable savings in man-hours. The safety factor will also be improved. Many repairs could be done at sea thus preventing a ship from coming into port. An added practical application of the bonding is its use on truck brake drums.

Another project conducted for a private industrial firm involved a fool-proof x-ray method for inspecting stainless steel tubing. The tubing was being used in nuclear power generators. A flaw could result in serious



Foam-in-place insulation for copper tubing created by Quantum, Inc. Lauren J. Kiest, new products manager, holds sample.

Electronically controlled paper cutter manufactured by the Smith & Winchester Mfg. Co., South Windham, was redesigned by Quantum, Inc. Electronic control panel, mounted on top of machine, allows operator to feed cutting instructions through twenty interchangeable stations.



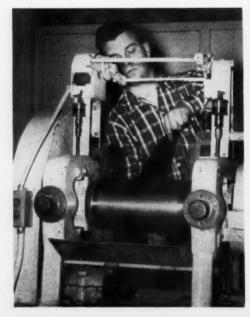
consequences. Quantum contrived a precision x-ray testing process embling 100% inspection on a continuing moving basis. The system assured complete safety, increased production and decreased manpower time.

"Sticky" problems and x-ray inspection methods were not the only difficulties presented to Quantum for a solution. The U. S. Army Engineers in their arctic explorations had been troubled for many years with cracking rubber. The rubber did not stand up under arctic conditions. Scientists know that cracking is caused by the degenerative effects of ozone, a gas in the atmosphere. Ozone action is activated by sunlight. Very little more is known about ozone. But Quantum managed to develop two types of ozone resistant rubbers. This was accomplished by changing the rubber's molecular structure. Again, the government realized considerable savings.

#### **Expansion Since 1956**

Over the years, Quantum expanded into many areas of research and development. In 1956, it commenced interpreting known research concepts and applying them to industrial needs. "Much data has been accumulated during the last 12-15 years which is applicable to present and future industrial and technological trends. The trick is to seek out this knowledge, visualize its potential, and test it out. Today, our projects are primarily (90%) carried out for private industries throughout New England. Only about

Rubber Mill is operated by associate staff scientist Eugene S. Yankura. The research laboratory has done extensive work in rubber and developed an ozone resistant (will not crack) rubber for the U. S. Army's arctic exploration bases.



10% of our effort is government sponsored," states Dr. Doede.

Quantum's clients have been able to develop products and methods in advance of their respective fields. In 1957, the firm moved to its present quarters in Wallingford, Connecticut, adjacent to the Wilbur Cross Parkway. From its humble barn-like beginnings, Quantum has grown into a 20,000 sq. foot facility located in a brick and stone building. It is fully equipped with chemical, physical, biological, electronic, radiation, rubber research laboratories and a library, office and machine shop.

The radiation facilities include a cobalt source for temperature control studies, and a warm (low level radiation) laboratory. An experimental greenhouse, an area for test animals and ten acres of land in Cheshire are used for biological studies. Presently, 28 people are employed. Five are major scientist experts in their particular fields. Four are staff scientists. The remainder are highly-trained technicians and office personnel. The staff is supplemented by six nationally famous consultants, specialists in their respective fields. The Yale scientific library is also utilized as a research source

The concern is now considered one of the leading independent research organizations working in four basic areas - product engineering and development, materials and design engineering, molecular engineering, and forecasting. Projects conducted at Quantum are numerous and varied. They may involve fundamental longterm studies of a given area of knowledge, a search for new materials, new analytical methods, novel products developed through the use of a new tool, radiation, and the improvement or more profitable production of present products.

These endeavors encompass consultation, chemistry, design and engineering, surface science (involving chemistry and physics to understand the phenomena operating in adhesives, lubrication and corrosion), radiation and radioisotopes, rubbers and plastics. Quantum's clients include large and small industrial firms. A strictly confidential relationship is maintained with all clients. The Quantum staff will assume complete responsibility for a research project or work with the client's own research group.

In the field of nuclear energy, Quantum did extensive research for the Atomic Energy Commission (AEC) on the management of nuclear materials. From this work stemmed the publication of a book on this vital subject. The Western New York Nuclear Research Center, located on the University of Buffalo campus, called on Quantum for guidance and help in the development of the center.

Quantum was consulted on the design and construction of this versatile research facility. It defined the Center's objectives which were presented to the National Science Foundation and the National Institutes of Health for obtaining financial grants, A Hazards Summary Report, based on Quantum's experience in the AEC project, was also prepared for the Nuclear Research Center which will provide unique research tools to the entire Western New York region for the advancement of knowledge and application of nuclear energy.

A more mundane project which can be appreciated by every homeowner is a foam-in-place insulation recently developed by Quantum. The insulation is applied on copper tubing used in plumbing while the tubing is manufactured. The foam type insulation binds itself to the tubing, is smaller in circumference, neater looking, and more effective than the presently used

Working closely with surgeons and other medical specialists, Quantum has developed silicone rubber hemispheres used to replace body tissues or parts during detached retina eye surgery. The rubber is completely tolerated by the human body and is also utilized in heart valves, muscle and tissue repair. For industry it has created a selflubricating rubber which has general applications as shaft seals, hydraulic cylinder seals and related functions.

The Smith & Winchester Mfg. Company of So. Windham, Connecticut, consulted Quantum when it desired to update its "Trimmastre" machine, an automatic, precision paper cutter and trimmer. Quantum modernized the cutter, increasing its efficiency and eye appeal. It also directed the development of the "Spacemastre," an electronic control panel used in conjunction with the "Trimmastre." The "Spacemastre" allows the operator to feed all desired dimensions through its twenty interchangeable stations. Instructions are carried out by the "Spacemastre" by translating a linear dimension into an electrical di-

The use of plastics has grown tremendously within the last decade. Quantum has worked cooperatively with both government agencies and industry in this field. It developed a fuel expulsion cell for auxiliary power units on missiles. The plastic container resembles a balloon made of extremely thin plastic. The balloon-like structure holds the fuel and accurately obeys an electronic command to eject its supply when needed. Quantum also devised a method to spray a very fine metallic film into the interior of flexible plastic bottles. The metal conducts electricity and does not detract from the pliability of the plastic. This process has definite applications for the electronics and chemical processing industries.

Man for all his astuteness and versatility is limited by the capacities of his brain. The computers provide a

mechanical means for supplementing (Continued on Page 30)

New products for potential marketing are examined by Charles C. Thomas, Jr., director of the Physical and Radiation Chemistry Division; Ernest W. Newman, sales manager and Lauren J. Kiest, new products manager.



# TAX ATTACK

By LEE SILBERMAN

Staff Reporter of THE WALL STREET JOURNAL

# States Step Up Efforts To Lift Tax Take From Interstate Companies: How Corporations Fight Back

■ WHEN a Trans World Airlines DC-7 stops at a Pennsylvania airport, most of the procedure is routine. It unloads and loads passengers and freight and takes on food and other supplies. But the captain imperiously waves off the airport's gasoline truck.

The reason for the wave-off is neither extra fuel tanks nor an unusually economical engine. It's that Pennsylvania is one of several states that tax aircraft fuel. So T.W.A., when safety permits, avoids refueling its planes in the Keystone State.

T.W.A.'s tactic points up the way that state taxes — on income as well as sales — are increasingly shaping the operations of companies that do business in more than one state,

Using complicated formulas, many a state long has taxed a portion of the income of a corporation which has its headquarters elsewhere but operates plants, warehouses, stores or other facilities in the state. In 1959, the U. S. Supreme Court held a state could tax income of companies which merely sent agents into a state to make sales. Under pressure from aroused businessmen, however, Congress last year passed a law barring any state from taxing a corporation merely because it sent salesmen into the state.

#### Taxing More Than 100%

The new law eases only slightly the tax pressure on interstate corporations. States are stepping up their efforts to tax the income of companies that have any facilities within their borders; because differing formulas are used, corporations complain they're occasionally subjected to state taxes on more than 100% of their incomes.

Even when a company does nothing but send salesmen into a state, it's not free from state tax worries. Many states are trying harder to collect "use" taxes; these are imposed when products are purchased from outside a state for use within the state. And the states are tapping the seller, not the purchaser, for the use tax.

Near Yulee, Fla., a short distance from the Georgia border, for example, is a state truck-weighing station. When a Miami-bound truck pulled into the station recently, a state agent checked over the driver's papers on his load of office furniture. A few days later, the shipper, a Boston firm, received a letter from Florida's revenue department calling attention to the state's law requiring out-of-state concerns to collect the 3% Florida "use" tax. This procedure is repeated dozens of times a day, not only in Florida but in many other states.

"The situation has reached the point where the states are establishing what amounts to customs offices at their borders," says Leon A. Rigway, comptroller of Asgrow Seed Co., seed distributors of New Haven, Conn.

#### More Field Agents

To try to boost their income tax take, states are sending more agents farther afield. California not long ago enlarged the staff of its permanent New York City office that checks up on Eastern companies doing business in California; the office now has 15 income tax auditors, compared with the previous 10. "Our aim is to see that taxpayers correctly interpret our regulations and that the proper amount of tax is paid to California," says J. J. Campbell, executive officer of the state's Franchise Board, which administers the state's corporate income tax.

Georgia, Louisiana and Washington are among other states that keep auditors almost continually on the road, checking records of corporations against tax returns filed with their states. "It takes a lot of digging to keep up with companies tapping a state's market," says Fred L. Cox, an official of Georgia's revenue department.

In Minnesota, state tax men now are winding up a year-long "census of business" aimed at flushing out non-taxpaying companies which have head quarters in other states but operate in Minnesota. "This has entailed culling company names from directories of office building tenants, Chamber of Commerce membership lists and classified telephone books," says Joseph Robertson, Minnesota's revenue commissioner. The census will be compared with the state's corporate taxpayer rolls, and dunning letters will go to companies that have not filed returns.

Minnesota's efforts were spurred by last year's Supreme Court decisions, which underlined for the states the opportunities available in taxing out-of-state corporations' income. After the decisions, Idaho, Utah and Tennessee amended their laws to allow taxing of income of out-of-state firms.

In Pennsylvania, the State Supreme Court in 1956 had thrown out a state law imposing an income tax on outof-state companies; after the U. S. Supreme Court rulings, the state court reversed itself. Today, Pennsylvania officials will meet representatives of interstate trucking firms that operate in Pennsylvania to demand that the companies resume paying income taxes to the state. Through payments from the trucking companies and other outof-state firms, Pennsylvania expects to pick up additional revenue of as much as \$5 million in the year ending May 31.

This article, published in the September 27, 1960 issue of the Wall Street Journal is being reprinted by permission of the publishers, Dowlones & Company, Inc.

After Congress had watered down the impact of last year's Supreme Court decisions, a number of companies stopped paying income taxes in some states. Glenmore Distillers of Louisville, for example, doesn't intend to file further returns to Alabama, Louisiana and Oregon, where it has sold its wares only through salesmen, according to C. W. Hupp, company tax manager. "These taxes probably would amount to only a few thousand dollars all told, but the clerical expense involved would run us considerably more," he says.

A New York-based publishing firm says it's considering moving several of its warehouses from states which impose corporate income taxes to states where no such tax is levied. At present, 36 states levy taxes based on income, and 28 states have laws specifically authorizing taxation of out-of-state corporations. Among the states without corporate income taxes: Flor-

ida, Ohio and Texas.

Northwestern States Portland Cement Co. of Mason City, Iowa, has closed its one Minnesota sales office, located in Minneapolis, and now is represented in the state only by salesmen. Says Hanford MacNider, president of the company: "We paid a 1959 tax to Minnesota, but we don't intend to file a return this year. We are satisfied that we are not liable because we no longer have any property there." Northwestern States was a party to one of last year's key Supreme Court cases; the tribunal upheld Minnesota's right to tax the Iowa company.

The High Court also played an important role in the states' drive to boost use tax receipts. The court last June held that Florida could compel Scripto, Inc., an Alabama-headquartered pen maker, to collect the Florida use tax on shipments it made into Florida, although Scripto has no office, warehouse or other facility there.

"Practically overnight, thousands of companies in the country now find themselves made tax collection agents for states with which they have no other connection," says a New York City accountant who specializes in state taxation.

#### **Ready to Seize Shipments**

At present, some 7,600 companies have agreed to collect the Florida use tax and turn the money over to the state, reports J. N. Aycocke, state use tax chief, That's an increase of more than 1,000 in the past year. Florida warns corporations that it stands ready to seize future shipments into Florida of any company that refuses to collect the tax.

Following the Scripto ruling, Pennsylvania increased to 30 from 24 the number of auditors it sends to check sales records of out-of-state companies; Pennsylvania levies a 4% sales and use tax. Florida and Pennsylvania have joined with Kentucky and Alabama in an informal pact to fight expected lobbying by business in Congress next year to overturn the Scripto ruling, according to Donald Murphy, a Pennsylvania tax official.

There's likely to be business pressure on Congress next year for new legislation on state income taxation of out-of-state companies, too. Many corporations contend the protection afforded by this year's law is insufficient. They report that a number of states are trying to tax income of companies which have no physical facilities in those states but which send in men to install equipment for customers or to put up advertising displays.

An Eastern equipment maker, for example, recently sold some heavy gear to a California customer, being careful to close the transaction at its main office. When the company sent an engineer to California to install the equipment, California insisted on taxing a portion of the company's income. The equipment maker now suggests that its California customers arrange for their own engineering work.

Not long ago, a New England paper manufacturer was preparing to promote its brand of paper napkins throughout the South. Shortly before the first ad was to appear, the company's tax men warned that advertising the firm's name, along with those of local suppliers that were to sell the napkins, could be construed by some state tax departments as evidence that the company had "sales offices" in the states and thus was liable for state income taxes. The paper maker dropped the promotional project.

Another paper products company carefully instructs its salesmen never to collect debts owed the company by customers in income-tax states; it fears this activity by the salesmen could make it liable for tax. John Dane, Jr., a Boston tax attorney, warns his clients that they're running risks if they employ a telephone answering service in an income-tax state; the answering service could be construed as a "sales office," he says.

Though some of these worries may seem far-fetched, the states' activities show they're stretching hard to boost their tax receipts. Recently, a New York City manufacturer sold electrical equipment to a Georgia customer, which then contracted with a Georgia firm to handle the installation. The

Georgia revenue department now contends that the installer is a "subsidiary" of the New York corporation. "On the basis of our findings, we can insist on both the parent company and the subsidiary filing a consolidated return, and in that way make sure we get a tax," says Georgia's Mr. Cox.

#### Other Tax Troubles

The state tax troubles of interstate corporations extend beyond income and use taxes, of course, T.W.A.'s by-passing of Pennsylvania's aviation fuel tax is only one example of corporate efforts to minimize the burden of other state levies.

Shell Oil Co. has saved "literally millions of dollars by setting up expert tax administration with emphasis on tax prevention," says Ream V. Miller, the company's general tax manager. A typical tactic: To schedule the flow of oil products from the companies' refineries around the country so that a low ebb is reached in a specific locality at the time that locality is assessing inventories for property tax purposes.

Both state officials and businessmen say they're disturbed over the confusion in state taxes, particularly in the field of income levies. Each income-tax state decides for itself what part of a company's profits is subject to the state's tax. Generally, such a state uses a three-part formula. It figures three ratios: The company's sales in the state to its total sales; the company's payroll in the state to its total payroll; and the firm's property in the state to its total property. Then the state averages these three ratios and applies the result to the firm's total profits.

Although most of the income-tax states use this formula, not all of them do. And some states that use the formula define the terms used in the computation differently. A number of states and industry groups have been urging uniformity, but so far to no avail. A major problem: The states cannot agree among themselves on the procedure to be set up.

Manufacturing states, such as New York, claim that all sales should be allocated to states where shipments originate. Other states, such as Georgia and Louisiana, have less manufacturing; they argue that sales should be allocated to states to which shipments go. In this situation, growing numbers of state tax men are convinced, the only possible solution is Congressional legislation to dictate uniformity.

# AMERICA, Wake Up!

A wise and loyal friend of the United States warns us: The cold war is real war... It is far later than we know... The Communists can win without changing their tactics... We cannot win without changing ours... We must assume the offensive... We dare not stand still... To do so is to continue to lose ground. This is a stern and urgent appeal. It is one that no American can afford to ignore.

#### By GEN. CARLOS P. ROMULO

■ SOVIET Communism is on the wildest and most reckless rampage of its ugly career, Primary target — the United States. The American chief of state has been openly insulted, American honor has been trampled and American citizens have been pushed around wherever Communists have power or influence. The Monroe Doctrine, shield of the Western Hemisphere, has been flouted. Communists are taking over in the Caribbean area by infiltration just as decisively as if by armed invasion.

In the face of such menace and humiliation a foreigner in your midst naturally looks for the reaction — an angry ground swell of popular protest. He looks in vain. The American people remain strangely unmoved. Even the cold-blooded murder of U. S. fliers fails to stir them out of complacency.

Such meekness in the greatest and still the strongest nation on earth is puzzling and disheartening to America's friends throughout the world. And there is danger in it. Meekness encourages the aggressor to overplay his hand, bringing closer the very catastrophe it would avert.

I realize that the survival of my own country, the Philippines, depends on the survival of the United States. Neutralism provides no protection against Communist expansion—as India is now finding out. My country, accordingly, disregards Red intimidation, and the incum-

bent President of the Philippines, Carlos P. Garcia, has voluntarily invited the United States to establish missile bases on our soil. Therefore, and because of my deep-rooted friendship for your country, I dare to speak out to you without inhibitions. I say:

"America, wake up! Shake off the course of inaction that is giving the forces of evil the right of way in this world! Face up to the blunt fact that you are now engaged in a real war and that it must be fought and won. This is the only alternative to defeat by default!"

The time for drowsy half-measures has run out. To hope for miracles, such as a change in Kremlin leadership, or friendly negotiations and wise treaties, or a "lessening of tension" is only to fall more inextricably into the Communist trap. Instead, the United States must vigorously provide world leadership. Your firmness, rooted in genuine strength of character, is today the free world's only insurance against the further spread of Soviet tyranny. Your faith that all men are equally entitled to life, liberty and the pursuit of happiness has always seemed to the rest of us a national purpose to inspire all mankind and to provide the answer to the pretensions of Red despotism. If now, through apathy or expediency, you waver in your devotion to these ideals of human freedom, a dark age of Communist totalitarianism is certain to engulf the human race.

At its rate of growth since World War II, the universal Communist police state could come into being in our own lifetime. Does this sound like an exaggeration? Well, ancient Romans, too, must have thought the idea of conquest by their clamorous barbarians was farfetched. Today, history moves with electronic speed.

Processes that in ancient times took centuries to unfold now explode in decades. Who would have thought it possible barely a generation ago, that Communism would soon stand astride two continents, from the Baltic to the Pacific, with extensions of its power in places as far apart as Africa and the Caribbean?

in

Surely it must be plain to all that Russia is bent on world domination. It must be equally plain that her leaders cannot be trusted. Yet who can doubt that when the Kremlin again decides to adopt a "soft" policy many of us will again be babbling about a "New Look" in Russia, congratulating ourselves on the excellent chances for "peaceful coexistence," and rejoicing in the fond illusion that the "cold war" is about to end?

The sad truth is that the Communists alone control the thermostat of free-world emotions, adjusting it anywhere that suits their needs in the range between glowing optimism and black despair. We ooze happy relief whenever the Kremlin chooses to lower the temperature, and are plunged into worried fear whenever the heat is turned on again. Each change astonishes us anew—and throws us into fresh confusion. We have become tragicomic puppets jerked up or down by strings clenched in Khrushchev's pudgy fists.

CARLOS P. ROMULO, Pulitzer Prize-winning journalist, soldier and statesman, has been the Philippine ambassador to the United States since 1954. Before that he was his country's chief delegate to the United Nations; in 1949 he was elected President of the Fourth General Assembly of the U. N. During World War II he served with Gen. Douglas MacArthur, was several times cited for gallantry in action. His many books include I Saw the Fall of the Philippines, Crusade in Asia, The United, The Magsaysay Story.

Ed. Note. In this article (copyright 1960 by the Readers Digest Association, Inc., Pleasant-ville N.Y. reprinted from the November 1960 issue with oermission and not subject to further reprinting without direct permission from Reader's Digest), General Romulo has minced no words in spelling out America's greatest challenge of the 1960's and in giving a general outline of how it may be met successfully by means of an all-out offensive without a nuclear showdown.

While this performance largely immobilizes Western strength, the Communists draw valuable political dividends from the false hopes they induce at calculated intervals. In the period before the Paris summit debacle, for instance, they induced the U.S. government to remove the last wobbly teeth from American broadcasts beamed to the Soviet people, and to ban the word "liberation" as applied to Communist captive nations. The idea was "not to spoil the friendly atmosphere," and "to avoid antagonizing" the Soviet leaders. But apparently no one thought to ask just how you avoid antagonizing a sworn mortal enemy whose sole purpose is to annihilate you utterly!

Regard the fantastic spectacle of Khrushchev's American tour — a propaganda triumph for world Communism and a body blow to anti-Communist forces everywhere — did this not set a world record for futile courting of a despot? The dictator whose whole life has been devoted, and will be devoted, to the destruction of every human right enshrined in the conscience of the free world, was hopefully welcomed as if he were a gentle dove of peace. How gullible can we be?

This grim and fateful comedy will continue until the free world, under forceful and effective American leadership, wakes up to the ruthless reality of the cold war, stops playing a gentlemanly defensive role and starts aggressively to outfight the Communists on their own terms. Dr. Robert Strausz-Hupé, who has analyzed the Communist concept of "protracted conflict," writes: "For the Communists, there are no different kinds of war, hot or cold. There is only one war - war to the finish." In this everlasting war, the Communists use any and every weapon, from propaganda leaflets to military force, from sabotage and murder to smiles and handshakes. And they are always on the offen-

The fact that the free world has always been on the defensive accounts for the amazing speed with which the Red enemy has succeeded in enslaving a third of the human race. We have allowed the Communists to take the initiative everywhere, to choose the battlegrounds, the issues, even the weapons at any given time. Free-world counteraction has been constantly improvised under these always unexpected assaults and has therefore been erratic and often panicky. Time after time we resort to a hurried shoring-up of some threatened position, which even if successful, merely retains what we already hold. The shameful idea seems to be that, if we can just barely hang onto what is clearly and rightfully ours, while the Communists scoop up everything else, we will be doing as well as could be expected.

We rush from one crisis to another, each plainly labeled "Made in Soviet Russia." We scramble from one segment of the globe to another, always at times and places of Soviet choosing. When we negotiate, it is invariably about some issue the Communists deliberately create for propaganda purposes and to keep us off balance: the Matsu-Quemoy islands, West Berlin, nuclear tests, disarmament. Never once have we aggressively raised issues to put them on the defensive. When will the flabby statesmanship of the Western world come to realize that the cold war is a real war and that, as with all wars, we are certain to lose it if we don't take the offensive?

The only explanation for this inaction must be our failure to understand even now the nature of the Communist challenge. But surely it should be clear to all that Moscow and Peiping have an inflexible goal - the creation of one Communist world - and a carefully planned strategy for achieving it. They know that they are engaged in a long war. They know that, short of ceasing to be Communists, they cannot settle for anything less than total victory in that war. We, on the other hand, feebly putting up our guard in a series of scattered defensive skirmishes, have no definite goal beyond the hope of a tolerable truce that will allow us to go about our daily affairs without any more annoying interruptions.

The irony of this is that an understanding of the Communist challenge is not hard to obtain, since it has been frankly spelled out by Kremlin leaders from Lenin to Khrushchev. Everything that has taken place in Asia, for instance, conforms to a blueprint drawn up by a Soviet-sponsored Congress of the Peoples of the East held in Baku in September 1920. There the master plan for exploiting colonial tensions and nationalist sentiment was formulated and published. But, blind to such repeatedly proclaimed and inflexible Red purposes, the United States and its associates have preferred to treat the conflict as an aberration, a casual misunderstanding that can be adjusted piecemeal by patient bargaining!

Meanwhile, Western leaders keep paying blackmail in concessions and small surrenders. Consider these instances:

The United States rolled out the red carpet for Anastas Mikoyan: a kind of preview of the later Khrushchev visit. Not long before, an American plane had been electronically lured into Soviet Armenia (Mikoyan's native area) and 17 American fliers were lost. The American government had documentary proofs of Soviet guilt, but withheld them until Mikoyan left, in order not to spoil his good-will tour. How much good did it do?

Before the Paris summit meeting was agreed to, there was a Foreign Ministers' Conference in Geneva. President Eisenhower stated repeatedly that, unless this conference produced concrete results, a summit conference such as Khrushchev was demanding would not take place. The Ministers' Conference accomplished nothing — but the summit meeting was agreed to notwithstanding. Should its failure have been unexpected?

In its anxiety to make the Geneva meeting successful, the United States came close to de facto recognition of East Germany (ardently desired by the Kremlin) by agreeing to "ob-servers" from East Germany on a par with those from West Germany. Khrushchev, having artificially created a crisis in West Berlin with his ultimatum, bellowed that the situation in that city was "abnormal." Washington went along with this, using the very same word. The obvious retort should have been that the situation in West Berlin, since it complied with treaty terms, was perfectly normal - that the abnormality was in East Germany, where Soviet domination continued in violation of postwar treaties pledging free elections.

Incorrigibly hopeful despite everything, the United States twice renewed the moratorium on nuclear testing, thus giving the Kremlin exactly what it wanted—a test ban without inspection. Even now there is hesitation about ending the moratorium, though the protracted negotiations have yielded only frustrations for the United States and propaganda victories for the Soviet Union.

The unfortunate truth is that the free-world leaders are dealing with a sinister global conspiracy by international gangsters as if it were an old-style dispute between civilized nations which respect the diplomatic niceties and the sanctity of treaties. We continue to hope for progress in phony "negotiations" which, on the Communists' side, are just a part of the cold war that we are losing

piecemeal. And, worst of all, the democratic coalition has been acting in the vain hope of "relieving tensions," stabilizing situations, "keeping the boat from rocking," of "containing Communism," instead of striving ultimately to climinate the scourge. Meanwhile, the Red offensive remains intense, planned and persistent.

I have had considerable personal experience with that persistence. When the United Nations was being launched in San Francisco in 1945, a charming, Spanish-speaking Russian "accidentally" found himself near me each morning at breakfast in the hotel dining room. He used the opportunity to talk about how the United States had "abandoned the Philippines in the war," and wondered aloud how I, as an Asian, could stomach a country that oppresses its racial minorities. Some years later, when I was the Philippine member of the Far Eastern Commission in Washington, a Soviet general on the commission continually sought me out and harangued me on the wickedness of the United States. It was obvious that he had been assigned to indoctrinate and pressure me. Still later, when I was president of the U.N. General Assembly, Andrei Vishinsky had me to dinner three times at the Soviet residence in Glen Cove, Long Island, where he deployed his considerable charm and forensic talent in an attempt to turn me against the West.

In my case, of course, these tactics didn't work. But I knew the same tactics were being employed with regrettable success against other more vulnerable Asians. Thus the Communists carry their ceaseless campaign down to the level of personal contacts, while Americans make no similar efforts. Have you ever heard of high American officials, speaking foreign languages fluently, "working on" pro-Communists or neutralists? As one Asian colleague said to me: "The Americans seem to recall that we exist only when some crisis in Asia very clearly endangers their own interests."

Consider another decisive front in the many-sided Communist offensive — propaganda. When President Eisenhower reached Manila last spring, some two million of my Filipino countrymen converged on the city in a tumultuous demonstration of affection for, and faith in, the United States. In view of the present widespread revolt against colonialism, the spectacle had a special meaning: these were people who had been for 48 years, until July 4,

1946, under American rule. Surely this dramatic show of friendship spoke volumes for the enlightened character of American relations with alien peoples under its flag. Similar massive expressions of warm esteem met the President in Korea, Formosa, Okinawa, India, Pakistan and Latin America. Vice President Nixon was given a vast and ecstatic reception in Poland.

Yet there was no effective American propaganda effort to impress the significance of these enthusiastic receptions on the rest of the world. On the other hand, the student riots in Japan which forced the cancellation of the President's trip, and the attacks on Vice President Nixon in Latin America — such incidents, engineered by Communists, have been successfully exploited by Red propaganda to convey to neutral nations the notion of a faltering and abased America.

Another result of the West's passivity in the face of the Soviet Union's ceaseless propaganda offensive has been to make Western "colonialism" the whipping boy in world opinion, while the cruelties of Red imperialism against its captive peoples are all but forgotten. Bloody oppressions in Hungary have not abated; massacres continue in Tibet; Chinese forces still occupy Indian soil and make probing forays into Laos and Nepal. Yet the West keeps up no continual barrage of propaganda about these Red iniquities.

No less remarkable is the success of the Kremlin "peace" and "total disarmament" pretensions. And this despite the known fact that Moscow and Peiping have been directly responsible for virtually every war and war scare since 1945. Witness the international sensation the Communists were able to foment over the U-2 incident, and compare this with the failure of the United States to arouse world opinion against the Soviets' repeated murderous attacks on American planes over international waters.

Dozens of other examples could be cited. To make matters worse, Communist progaganda is allowed to undermine public morale and sow confusion in the United States itself. Former President Herbert Hoover was alluding to this, in a recent speech, when he spoke of "a multitude of citizens who have sunk to the posture of perpetual apology and seeming shame for ourselves."

America's puritanical background and its inherent honesty seem to have produced an inordinate guilt complex. Somehow, it has become the fashion to belittle major American accomplishments, while all Soviet claims, including dubious boasts of *future* accomplishments are played up in a groveling spirit.

How are we to account for this persistent failure of America to project on the mind of mankind an accurate image of its own society and a truthful image of the Communist slave world? Why does the United States accept setbacks in this area so supinely? Certainly this cannot be due to lack of propaganda ability—in a country where the arts of image-building are so highly developed. What is lacking is a clear grasp of the incalculable importance of this phase of the protracted conflict.

A global campaign of public education should be mounted on a scale to outmatch the Communists. It must be resourceful, aggressive, unafraid and prepared to turn their own weapons of subversion and infiltration against them. But this will never be done until the necessity of defeating Communism — defeating, mind you, not resisting — is recognized. Only then can you begin to tell the truth as uninhibitedly and effectively as the enemy tells lies.

From the hour of its birth, the Soviet regime has regarded agitprop - agitation and propaganda as no less important than military strength. So has Red China. Both invest billions of dollars in these enterprises. They have hundreds of special schools which turn out armies of experts in brainwashing and subversion, for deployment throughout the world. In addition, they train Asians, Africans, Latin Americans, West Europeans and even citizens of the United States in all revolutionary techniques, from propaganda and sabotage to street rioting and guerrilla fighting.

How long will free men refuse to see the obvious: the Communists can expunge what remains of freedom with these weapons of political and psychological combat. How long will free men discount this prime threat as "merely" a cold war, a side show, that can be "ended" through social amenities and an exchange of dancers?

The 1960's are the critical years. This is the time for heroic decisions — decisions that will at long last enable the free world to gain the offensive. It is much too late for negative, purely defensive strategy. We cannot possibly win that way. We must fight back in deadly earnest, using a large-scale concentration of brains, skills and budget — everything we possess — to outmaneuver the Communists in their own kind of war.

(Continued on Page 44)



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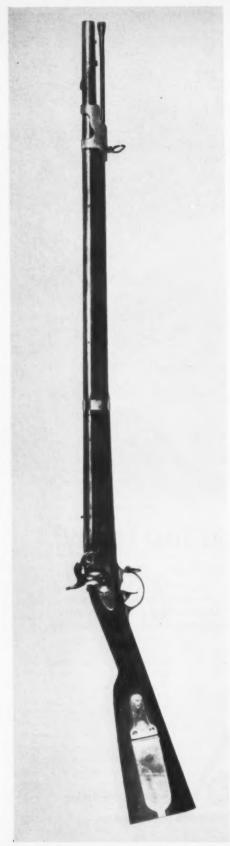
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It was not long before Whitney's principles were adopted by other manufacturers in Southern New England; then the idea spread further afield, and the modern concept of manufacture became firmly established.

Through all the years since Whitney's time Southern New England has continued to be one of the world's principal industrial areas. And the making of arms and ammunition has continued to be one of its leading industries. Ordnance from this region is known world-wide for its quality.

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#### News Forum

This department includes a digest of news and comment about Connecticut industry of interest to management and others desiring to follow industrial news and trends.

♦ VINCENT J. RODDY, president of the American Screw Co. Division of Noma Lights, died recently at the W. W. Backus Hospital, Norwich, after a brief illness.

Mr. Roddy, who has served as a director of MAC since January, 1959, had been American Screw president since January, 1958, succeeding the late Eugene E. Clark. He had served as assistant general manager, vice president and executive vice president. He was also a director of Noma Lights.

Mr. Roddy was born in Providence and held degrees from the University of Rhode Island, Brown University and New York University. He was a director of the Connecticut Bank & Trust Co., and had held various offices in the U. S. Wood Machine and Tapping Screw bureaus. He was a member of the Willimantic Chamber of Commerce and Turks Head Club of Providence.

He is survived by his wife, three daughters, his mother, a brother and two sisters.

WALTER C. MILKEY, vice presi-

dent finance of The Stanley Works, New Britain, retired recently after 51 years of service.

Mr. Milkey has served as a director of the company since 1954 and as vice president finance since his election in 1955. He will continue as a director and as chairman of the Finance Committee of the Board, Garth W. Edwards, director of finance, will assume Mr. Milkey's duties.

♦ G. DONALD JACOBSON, president of The Newcomb Spring Corporation, Southington, has been elected president of The Spring Manufacturers' Association of the United States.

The SMA is an association comprised of over 100 of the leading spring manufacturers of the United States and Canada, organized to develop new techniques through research in the spring and allied fields.

♦ IRVING MANDE has been named manager of research and development for Edwards Company, Inc., Norwalk, producer of control, communications and protection equipment, it has been announced by A. E. Sharp, vice president-engineering and manufacturing. Mr. Mande was formerly supervisor of research and development.

He joined Edwards in 1953 as an electrical engineer. He was named research and development supervisor three years later. Mr. Mande received the Master of Science degree from Stevens Institute of Technology in 1955. He won the B.E.E. in 1950 from City College of New York.

♦ FAYETTE LEISTER, engineering vice president of The Fafnir Bearing Company, New Britain, retired recently after 40 years with the company.

Mr. Leister joined Fafnir in 1920 and served successively as sales engineer, assistant works manager, head of the Detroit sales office, and engineering manager. He was elected vice president of engineering in 1946 and a director of the company in 1954.

Widely known in the bearings industry, Mr. Leister holds a number of patents and is the only active member of the original Annular Bearing Engineers Committee. This group, formed in 1930, was influential in establishing uniform standards for the bearings industry.

MANUFACTURING FACILI-TIES of Associated Gaskets, Inc., Bridgeport, will be improved by at least 40% when new construction and a new plant layout are completed early this year, according to Victor Castaldo, president and general man-

A new building of over 5,000 square feet of floor area will provide needed space for recently purchased rubber buffing and cutting machinery, which

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will more than double the production of these departments.

The company makes all kinds of mechanical rubber tools, including "O" rings, bumpers, grommets, bushings, in addition to special fabricated parts to customers' specifications.

♦ GEORGE HAZELZET has been appointed executive vice president and general manager of Connecticut Broach and Machine Company, New London.

Before joining the New London firm Mr. Hazelzet was an independent management consultant at Larchmont, New York, Prior to that he organized industrial projects in Long Beach, Buenos Aires, Lima and La Paz,

A native of the Netherlands, Mr. Hazelzet served in World War II with American-based Dutch Navy air forces, serving as a pilot in the South Pacific.

♦ THE APPOINTMENT of Michael J. Perrin as vice president and general manager of Hartford Machine Screw Company has been announced by James A. Taylor, president of Standard Screw Company.

Mr. Perrin has become the operating head of Hartford Machine Screw Company, a division of Standard Screw Company, assuming the duties of Mr. Taylor, who will devote full time to the responsibilities of president of the parent company.

Mr. Perrin joined the company in 1934 and has been factory manager and vice president in charge of manufacturing.

Mr. Taylor succeeds W. D. Corlett, chairman of the board, as chief operating officer of Standard Screw Company, Mr. Corlett will devote his time to the promotion of new products.

The company's products include fasteners, automotive valve train items, cold drawn steel bars and coils and proprietary products. One of the most outstanding proprietary items is the Roosa Master fuel injection pump developed and manufactured in Hartford.

♦ ELTON T. BARRETT, president of Trak Electronics Company, a division of CGS Laboratories, Inc., Wilton, has announced the resignation of Carl G. Sontheimer as a member of the board of directors and secretary of the corporation.

Roger White, president of Tucor, Inc., Norwalk, has been named to the board and Francis M. Ellis, partner of the law firm of Carter, Ledyard & Milburn, New York City, has been elected secretary of the corporation.

Trak Electronics Company designs and produces communications and other electronic equipment and com-





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♦ A NEW technical filmstrip with sound shows how die sets serve our modern mass-production industries, and how die sets themselves are manufactured, step-by-step, at The Producto Machine Company, Bridgeport. Titled "Mass-Production Insurance: The Dependable Die Set," the film was photographed largely in Producto's foundry and manufacturing facilities.

The 15½-minute 35mm filmstrip with record is said to be ideal for showing at appropriate gatherings of industrial associations, local meetings, in-plant apprentice or toolroom groups, and vocational high schools.

It is being presented upon request at meetings throughout the United States by representatives, who offer to discuss questions relating to die set manufacture and use after showing of the film. Requests and inquiries should be directed either to Producto representatives, or to P. R. Marsilius, executive vice president.

♦ AN AGREEMENT to establish a jointly-owned company, Hitachi Perkin-Elmer, Ltd., has been announced by the Perkin-Elmer Corporation, Norwalk, and Hitachi, Ltd., Tokyo, Japan. The agreement is subject to validation by the Japanese Government.

The purpose of the joint venture is to cooperate on the research, development, manufacture and sale throughout the Free World of scientific instruments. Hitachi Perkin-Elmer Ltd., will coordinate these activities, with the actual development, manufacture and sale of products to be handled by Hitachi and Perkin-Elmer and their affiliated companies. The new company will have its headquarters in Tokyo.

Hitachi, with sales of almost \$600 million, produces electrical and electronic products. Perkin-Elmer produces scientific instruments, electronic optical systems and electronic components for industrial, space and defense, and scientific uses.

Under the terms of the agreement, Hitachi and Perkin-Elmer and their affiliated companies may cross-license one another for manufacture in their respective countries of scientific instruments and for sale of such instruments throughout the world.

♦ THE 1961 program of monthly meetings of the Hartford Chapter, Society for the Advancement of Management has recently been announced. The meetings are held at The Westerly Restaurant, West Hartford, starting at 5:30 P.M. The program follows:

February 16, "Managing the 50-Million Dollar State Welfare Fund," Bernard Shapiro, commissioner, Connecticut State Welfare Department, Hartford; March 16, "Contract Negotiations in the Early Sixties," Jay Siegel, Attorney-At-Law, Hartford; April 20, "Manipulating the Money Market" — speaker to be announced; May 18, Top Management Night, "Creating the Corporate Image," James Q. duPont, vice president, public relations, E. I. duPont de Nemours & Co., Wilmington, Delaware (other speakers to be announced); June 15; Annual Business Meeting.

An all-day conference has been scheduled for March 22 on "Business Games With a Computer," speaker to be announced. In April, seminars on "Finance for the Non-Financier" will be held on the 5th, 12th, 19th and 26th. The speaker will be Bernard Cantor, controller, American Standard Products, Hartford.

♦ JOHN E. KREINER has been appointed general manager of engineering for Edwards Company, Inc., Norwalk, it has been announced by A. E. Sharp, vice president-engineering and manufacturing.

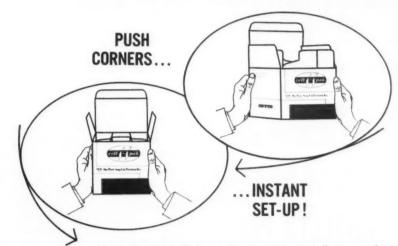
Mr. Kreiner has been associated with Edwards for more than 16 years. He

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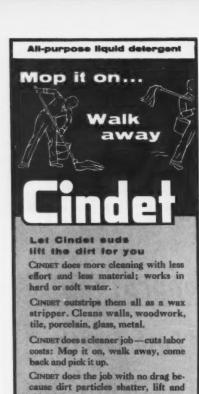
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joined the company in 1944 as a design and customer-service engineer and six years later was appointed a sales engineer in its central region head-quarters office in Chicago. Shortly thereafter, he became regional engineer, establishing Edwards' technical sales organization throughout the 16-state central region. He returned to Norwalk in 1959 as assistant to the director of engineering.

♦ THE MITCHELL-BRADFORD Chemical Co., Milford, has announced the granting of a U. S. Patent on its new "Activated Black Magic" for producing a black oxide finish on steel (ferrous metals). The new item is the latest development in the line of Black Magic blackening processes and it is said to be an extraordinary step forward in black oxide processing.

It is a new approach to a black oxide process because of its constant, automatic self-regenerating, decontaminating, catalytic action, according to the manufacturer. It is said to blacken many types of hardened and passive steels which heretofore were finishing problems.

♦ THE DEVELOPMENT of a new 100 Amp Heavy Duty Safety Switch for commercial and industrial installations has been announced by The Arrow-Hart & Hegeman Co, of Hartford,

The company states that safe operation, dependable performance and positive protection for the user have been built into this new switch. The interlocking indicating cover can be opened only when the switch is in the "off" position and the switch cannot be operated when the cover is on.

♦ A NEW four-page catalog section (24A) issued by Rolock Incorporated, of Fairfield, details the company's new Reversible Endothermic Gas Generators which are available in rated capacities of 500, 750, 1000, and 1500 C.F.H. with listed maximum capacities of 650, 875, 1250, and 1750 C.F.H. respectively.

Unusual features claimed for this equipment include complete reversibility, with resultant self-cleaning of catalyst beds; precise gas-air metering and mixing; complete cracking of gas; triple cooling of prepared atmosphere to prevent reverse reaction.

The catalog section describes the equipment in detail and includes flow diagram, equipment list, and specifications.

♦ THE TWIN-TURBINE Sikorsky S-61L, the first helicopter ever designed specifically for airline use and to airline passenger standards, was flown publicly for the first time recently.

The S-61-L is a new generation helicopter and Sikorsky Aircraft, a division of United Aircraft Corporation, expects that the big 25- to 28-passenger turbocopter will play a major role in expanding helicopter passenger line operations throughout the world.

Lee S. Johnson, Sikorsky general manager, announced that the S-61-L will go into scheduled passenger service in 1961 with Los Angeles Airways and Chicago Helicopter Airways. Los Angeles has ordered five and Chicago four.

The flight preview was for an audience composed of press representatives from throughout the East, domestic and foreign airline operators, government officials, United States military observers, and members of the aircraft industry.

♦ AIR-VAC Engineering Company, Shelton, has announced the availability of a new bulletin on their Bazooka Vacuum Probe and Transducer.

The bulletin describes how production operators now can pick up and handle miniature parts of all shapes and materials rapidly with Bazooka Vacuum Probe, which has a finger-operated shut-off valve for releasing parts from the probe tip. Special tips are also available for picking up more than one part at a time. If vacuum is not available, a vacuum transducer converts shop compressed air into a vacuum.

Copies of the bulletin are available from the company.

♦ THE FORMATION of a new company, Pac-Tron, Inc., Willow Street, Mystic, has been announced by James R. Fox, Jr., president.

The company will have two divisions, the Marine Division and the Packaging Division. The Marine Division will design and manufacture a new line of buoyant marine products, such as boat bumpers, buoys, life rings, rafts, vests, ski-belts, etc., made of a new foam-type plastic.

The Packaging Division will supply a new type of foam cushioning material called "Pack-Tin," which will protect expensive, delicate or sensitive electronic, electrical, or optical products, while they are being shipped by land, sea or air.

- ♦ RICHARD P. PEARSON, who has been with The Risdon Manufacturing Company's Wire Goods Division since he joined the firm in 1951, has been named assistant sales manager of the Aerosol Division, it has been announced by Donald S. Tuttle, Jr., vice president in charge of sales for the Aerosol and Cosmetic Divisions.
- ♦ A CONTRACT amounting to

\$8,613,613 for continued production of T53 gas turbine engines has been awarded Avco Corporation's Lycoming Division, it has been announced

by the Stratford firm.

The award was made by the Air Force's Aeronautical Systems Center, Air Materiel Command, Wright-Patterson AFB, Ohio, and calls for additional quantities of both the 960 shp T53-L-3 turboprop engine and the 960 shp T53-L-5 helicopter version.

♦ THE FIRST remote-controlled 16mm sound motion picture projector to be used in a commercial aircraft has been developed by the Reevesound Co., Inc., a subsidiary of Reeves Soundcraft Corp. The new motion picture system was designed for Inflight Motion Pictures, Inc., to be used by major transcontinental and intercontinental airlines for airborne presentation of pre-release feature pictures. Each program is to run from 11/2 to 2 hours.

The first prototype system was developed to operate in Boeing 707 jet airplanes. The first installation has been made in an intercontinental 707 jet operated by TWA. In order to meet the space and weight problems in the jet plane, Reevesound developed a transistorized sound system for motion picture projection. The equipment is contained within the structure of the plane so that its presence will not be apparent to the passengers. Passengers will hear the movie sound through individual lightweight head-

♦ THE ARMSTRONG Rubber Company of West Haven has unveiled architect's drawings of the 25 million dollar tire producing plant soon to be constructed in Hanford, California.

The one million square foot plant is believed to be the largest building to be constructed in the San Joaquin Valley under a single contract. The initial construction is designed to have a capacity of 10,000 tires per day and will employ 500 to 600 persons operating on three shifts.

Armstrong's present tire producing capacity of 40,000 tires daily is sold exclusively to the replacement tire market through 1,500 independent distributors across the country. Export sales to 70 foreign lands are handled by the company's export division in New York City. Besides tires and tubes, Armstrong manufactures synthetic foam and retread rubber.

♦ A BULLETIN describing the new Micro-Wynd disposable filter cartridges for filtering plating solutions, alcoholic beverages, diesel fuels, chemical process streams and many other fluids, has just been issued by The

FOR THAT NEW BUILDING . . .

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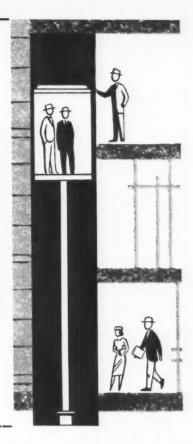
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Cuno Engineering Corporation, Meriden. The bulletin describes the patented Micro-Wynd manufacturing process by which a separate filtering medium is interwoven between the structural spiral windings, on a perforated metal core.

Performance advantages, user test reports, micron densities, fluid compatability and other specifications are included. Copies of the bulletin MW-100, are available from the company.

♦ THE FIRST, practical, major advance in the building of stamping dies for the metalworking industry is said to have been developed by Acme Steel Rule Die Corporation, Waterbury. Following years of development, the dies are now widely accepted and performance proved by industries in such markets as electrical, electronic, bearing, automotive, aircraft, marine, specialties, and others.

The manufacturer claims that the dies hold their accuracy and burr-free qualities for short-run production of up to 50,000 parts. The average thickness of metal stamped from these dies is one-eighth inch, and the metals most commonly used include copper and copper alloys, lead and lead alloys, nickel and nickel alloys, carbon and stainless steels, and aluminum.

The dies are made to fit standard die sets, and they employ the use of steel cutting rules and punches mounted in Hy-du-lignum bases. A bulletin, ADH 126, is available on request.

A NEW utility micrometer to quickly and accurately measure compound curvatures on airfoil surfaces has been introduced by the J. T. Slocomb Co., So. Glastonbury.

In the past, the use of a conventional micrometer with a flat anvil and spindle could result in errors. The curved surface being measured did not always contact fully with the anvil. Slocomb's utility micrometer has an anvil and spindle comprised of small diameter pointed terminals, permitting accurate measurement of curved surface parts. The micrometer has a measuring capacity of 0 to 1" and a 3" deep-throated frame.

In addition, it is said to be ideal for testing wall thicknesses on tubing or other curved parts.

Slocomb is preparing to mass produce the utility micrometer, both as a conveniently read tool and one incorporating the "Speedmike" head.

♦ THE ELECTION of George H. Mettler as a vice president of Textron, Inc. has been announced by Rupert C. Thompson, Jr., Textron chairman. Mr. Mettler has been president of MB Electronics, New Haven, a division

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of Textron Electronics, Inc.

Mr. Mettler is moving to Textron's home office in Providence to coordinate and assist in development of the firm's international business. Succeeding Mr. Mettler as president of MB Electronics, will be Charles D. Brown, who has been an executive of the General Electric Company for seven years, most recently as manager-marketing of the GE Instrument Department.

♦ GEORGE W. HERMAN has been appointed manager of the Allison abrasive wheel plant of Allison-Campbell Division, American Chain & Cable Company, Inc., Bridgeport.

A graduate of Cooper Union School of Engineering, New York, Mr. Herman was first employed in October, 1929, by the Wilson-Maeulin Company, New York, which later became the Wilson Mechanical Instrument Company. In 1944 the latter company became a division of American Chain & Cable Company, Inc., and its operations were transferred to Bridgeport, where Mr. Herman served as assistant plant manager until his recent appointment.

- ♦ A TWENTY-PAGE, two-color brochure that describes the technical capabilities of Singer-Bridgeport, of Bridgeport, a division of the Singer Manufacturing Company, is available from the company. Information is provided on research, development, production, and field and technical data services offered to the Defense Services, industry, their prime contractors and customers.
- ♦ STANLEY ELECTRIC TOOLS, division of the Stanley Works, New Britain, has announced its entry into the air-driven industrial tool field.

A special sales force to pioneer the sale of the new air routers and 12gauge air shear has been announced as follows:

Donald B. Robinson, Jr. has been appointed district manager of the southern territory, Laurence K. Schwartz will represent Stanley in the western territory, Corrado J. Attardo has been appointed to the northeast territory, Myron Henowitz to the east central territory and Kenneth H. Koehler has been named sales representative in the midwest territory.

♦ IN ORDER to participate in the growing industrial economy of India and the Far East, The Bullard Company, Bridgeport, has licensed Kirloskar Brothers, Ltd. with home offices in South Satara, India, to build Bullard vertical turret lathes and horizontal boring machines. In addition, they have also been appointed sales agent to sell other Bullard machine tools in

that area, according to Francis L. Dabney, executive vice president.

Kirloskar Brothers, Ltd. is a well known manufacturing organization in India with three large plants producing agricultural equipment and implements, diesel engines, electric motors, pumps, valves and machine tools.

♦ THE A. H. NILSON Machine Company, Shelton, has announced their new No. SC-00 Straightening & Cutting-off Machine. The machine was designed to fill a need for a machine capable of straightening and cutting-off short lengths of round wire up to 3" and in sizes up to .045" diameter basic wire (to .060" soft materials), or its equivalent in

ribbon metal in widths to 3/8". Lengths are cut off at rates up to

400 per minute.

While designed basically for wire straightening and cutting off, the new machine can be tooled to perform a variety of secondary operations, such as forming, heading, coining or piercing and winding, according to the company.

♦ PETER H. MORGANSON has been appointed manager of engineering for Veeder-Root Incorporated, Hartford, manufacturers of computers and counting instruments.

Mr. Morganson, who had been assistant chief engineer since September 1958, assumes full responsibility for

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product and manufacturing engineering.

The company has also announced the appointment of Sanford B. Neister as sales manager for electronic products. He will be headquartered at the Danvers (Mass.) Electronics Controls Division of the firm.

♦ THE MILL-ALL COMPANY, Plantsville, has announced a complete line of standard-sized carbide drills, end mills, boring bars, counterbores, and countersinks. These tools are the result of years of research by the company's engineers to provide the proper carbide grade and correct tool design characteristics for maximum cutting efficiency, long life and repetitive accuracy. Size information and suggested operating rpm are stamped into the shank of each tool.

Cylindrical see-through packaging of each tool provides protection "on the shelf" in the tool crib and allows

instant identification.

A catalog on the complete Mill-All line is available from the company.

♦ GABB Special Products, Inc., Windsor Locks, has recently introduced a new Shear-Flow continuous mixer that has been specifically designed to provide high shear action in continuous mix operations. Incorporating the same design principle as the portable Shear-Flow, the new continuous mixer is said to be capable of mixing any liquid that can be pumped, with results better than or comparable to that of more expensive equipment.

Although small in size, Shear-Flow is designed to handle high viscosity materials in a minimum of time, providing a complete recirculation and thorough blending, homogenizing, emulsifying or dispersing.

The RL Hi-Shear Head can be powered with motors ranging from 1 to 10 horsepower depending on the power requirement demanded by the application.

♦ THE RETIREMENT of Laurence G. Bean, who has served over 40 years in various executive capacities with The Bristol Company, Waterbury, has been announced.

He joined the company in 1920 as a sales engineer in the New York office. Subsequently he served as district manager of the Boston office for five years and district manager of the Chicago office for five years. In 1930 he became assistant chief engineer at the Waterbury plant. Since that time he has served as assistant general sales manager, general sales manager, vice president in charge of engineering and vice president in charge of engineering. For the last few years he has served as special consultant.

♦ THE 75-YEAR OLD Cooper Thermometer Company of Pequabuck, has recently been sold to Floyd Wallace of Wallingford.

Horace R. Whittier, president of the company, will remain in that position, with Mr. Wallace succeeding Elmer Whittier in the position of vice president and treasurer.

Pioneers in the manufacture of oven thermometers, the company started business in Pequabuck in 1885. The major product lines of the company have been expanded in recent years to include weather instruments, housewares lines and thermostatic instruments for industrial uses.

Mr. Wallace is a fourth generation member of the Wallace Silversmiths family of Wallingford. He was in charge of product development and planning and merchandising for Wallace previous to its sale to Hamilton Watch last year.

The Whittier family has been responsible for the direction of Cooper Thermometer Company for 58 of the firm's 75 years.

♦ JAMES R. KERR, president of the Lycoming Division of Avco Corporation, Stratford, has been elected presi-

dent of Avco.

Kendrick R. Wilson, Jr. was named chairman of the board and Avco's chief executive officer, succeeding the late Victor Emanuel.

♦ CARL G. SONTHEIMER has announced the formation of Anzac Electronics, Inc. for the design and manufacture of industrial and laboratory test equipment. The engineering staff includes Allen F. Podell, engineering physicist, and Cornell graduate.

For the past 13 years Mr. Sontheimer has been associated with CGS Laboratories, Inc. in Wilton, which he founded in 1947 to engage in the development and manufacture of electronics equipment.

Mr. Podell recently won the NEREM prize for the most significant electronics engineering contribution by a student with a paper describing his new approach to broadband transformer design.

♦ ROBERT I. METCALF has been appointed vice president for administration of Olin Mathieson's Winchester-Western Division, New Haven, it has been announced by Stanley de J. Osborne, president of the corporation.

Mr. Metcalf, who had been director of administration, has been with the company since 1950. He has served as industrial relations manager, director of staff services and director of administration.

Mr. Metcalf has won wide recognition for implementing the division's



Big wheel used as pulley to drive mill for \$2 million automatic tube rolling facility being installed at Chase Brass & Copper Co. in Waterbury is examined prior to installation. The new equipment, among the most modern and efficient of its kind, is scheduled to be in full operation early this year. The wheel, nine feet in diameter, is part of the 20 ton crank shaft assembly used as the "muscles" for the installation.

program for 1,200 retirees of the company's New Haven operations. Because of the company's activity in this field he was asked to serve as an alternate delegate to the White House Conference for the Aging held in Washington last month.

♦ ROBERT M. GORDON has been elected executive vice president of the Milford Rivet & Machine Company, Milford, manufacturers of rivets, rivet-setting machines and cold-

headed specialties.

In 1942 Mr. Gordon joined the Penn Rivet & Machine Company of Philadelphia, where he worked in manufacturing and engineering capacities. After Penn Rivet was acquired by Milford Rivet in 1945, he was transferred to the New England division as machine sales manager. He then was successively appointed sales manager of the New England division and assistant general sales manager, before leaving the company to join the Torrington Manufacturing Company, Torrington, as sales manager of the Air Impeller Division.

He returned to Milford Rivet two and one-half years later as general sales manager and in 1957 was elected

vice president of sales.

♦ J. LeROY SCHWEYER, president and treasurer of the National Silk Company, Coventry, died recently after a long illness. He had been a director of MAC, representing Tolland County, since January 1957. He was chairman of the advisory board at the Windham branch of the Connecticut Bank and Trust Co. and a member of the First Congregational Church, Coventry.

A Mason, Mr. Schweyer was active





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New officers of MAC are shown with outgoing president Harvey L. Spaunburg at the annual meeting of the Association's Board of Directors. Left to right, A. W. Cavedon, vice president, Mr. Spaunburg, Carlyle F. Barnes, president, John W. Douglas, vice president.

and worked for the Shriners Hospital for Crippled Children at Springfield, Mass. He also gave liberally of his

BLOOMFIELD

EAST HAMPTO

EAST HARTFORD GROTON HARTFOR MANCHESTER MERIDEN

DANIE LSON

time to Boy Scouting. He was president of the Eastern Connecticut Council of Boy Scouts during the past three

years and on November 15 was presented the Silver Beaver award for distinguished service to Scouting.

He was active in civic and community affairs, including the American Red Cross, the Salvation Army, Windham Community Memorial Hospital and the Nathan Hale Community Center.

Mr. Schweyer served as a trustee of the Conecticut Cancer Society and on November 22 was presented a citation from the American Cancer Society "in appreciation of his valuable service in the control of cancer."

He is survived by his wife, one daughter, a grandson, all of Coventry, a brother and a sister.

♦ HAROLD E. PAPE, vice president and assistant to the president of The Stanley Works, New Britain, retired recently.

Mr. Pape, a member of the Board of Directors since 1954, was elected to the position from which he retired in October 1959, and had served as executive vice president since 1957. He will continue as a director of the company.

Considered as one of the leading authorities on steel scrap, Mr. Pape was chairman of the local scrap drives during World War II. He also served

### Statement of Condition

December 31, 1960

#### RESOURCES

\$125,995,109
81,671,805
50,941,316
199,308,528
1,496,886
5,312,224

Other	Assets	 											1,006,088
													\$465,731,956

LESTER E. SHIPPEE, Chairman RAYMOND C. BALL, President

#### LIABILITIES

Deposits	\$402,218,444
Deferred Credit due Federal Reserve Bank	16,892,747
Unearned Income	4,598,358
Accrued Federal and State Taxes on Income	2,351,894
Dividend Payable in January	504,584
Other Liabilities	2,817,041
Reserve for Contingencies	500,000
Capital Funds:	
Capital Stock \$12,614,587 (Par Value \$12,50)	
Surplus 15,000,000	
Undivided Profits 8,234,301	
Total Capital Funds	35,848,888
,	\$465,731,956

POMEROY DAY, Executive Vice President JOHN B. BYRNE, Chairman of the Executive Committee

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in Washington as a member of the Steel Scrap Division of the War Production Board, representing New England.

He is a director of the New Britain General Hospital, and was an original member of the New Britain Redevelopment Commission. He is a trustee of St. Maurice's Church and a member of the Shuttle Meadow Club.

♦ SETON Name Plate Company, Inc., New Haven, manufacturers of metal and plastic identification markers, has recently completed a contract for furnishing more than 300,000 pressure-sensitive pipe markers for use on Polaris-type Nuclear Submarines.

The markers manufactured by Seton for Electric Boat Division of General Dynamics Corporation are made on a pressure-sensitive cloth tape with a permanent type self-adhering backing. Each marker is coated with a silicone-base top coating to provide an extremely durable surface.

♦ FRANKLIN FARREL III, president of the Farrel-Birmingham Co., Ansonia, has announced that the company will close its Derby foundry and erect a \$1 million addition to its Ansonia foundry.

He said it is planned to transform the Derby foundry into a welding shop. The remainder of the Derby plant, including the machine shop, erecting and the box shop, will be unaffected.

♦ ANDERSEN LABORATORIES, Inc., West Hartford, manufacturers of ultrasonic delay lines and other electronic devices utilized in radar, missile and rocketry applications, has offered for sale as of December 6, 1960, its first public offering of 150,-000 shares of common stock, without par value.

The stock offering is being made through Putnam & Company, Hartford, chief underwriter and representative of six other participating underwriters in New York, Philadelphia, Baltimore, Boston, Atlanta, Newark, New Haven and Meriden.

Organized as a Connecticut corporation in 1951 as a successor to a proprietorship formed by Walther M. A. Andersen in 1950, it has experienced a solid growth based on advanced research and development that has gained wide acceptance for its highly technical devices currently being produced in volume for the military services and to a lesser degree for civilian purposes.

Receipts from the sale of this first public offering will be used to acquire stock from selling stockholders, pay off obligations and furnish working capital for the company's expanding operations.



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in income due to the interruption of your business, even liability claims. Surprisingly enough, comprehensive protection from The Travelers costs you little more than you may be paying now for inadequate coverage. Get details from your Travelers man. See him for any type of business insurance.

THE TRAVELERS Insurance Companies HARTFORD 15,

#### **Public Relations**

By CHARLES E. REICHE **Public Relations Director** 

#### Management's Responsibility to PR

FOR years certain shrill voices in the public relations craft have claimed that the PR directors should, in effect, sit in the laps of top management and be privy not only to what management is planning but to what management is thinking.

These voices go further. They say that management should base much of its thinking on cues furnished it by the public relations director.

In the welter of claims made for PR by this element of the PR industry there is one point of view which is eminently correct. You should let your right hand know what your left hand is doing. Nothing is more infuriating or frustrating to news people than to call a PR official at a company with a question or series of questions only to be told "I'll have to check that out with the boss and call you back."

There are times with fast-breaking news stories when this kind of thing is unavoidable. Day in, day out, however, it is a bad way to do business. Management should never bypass its PR department and should keep it informed all the time of what it is doing and how this activity should be presented to the public. What is the point in having a PR organization if the PR staff is kept in the dark about a company's activities which are bona fide news?

There are endless stories in the PR business, some of them hair raising, others merely ludicrous, of what can happen when communication between top management and the PR department is sluggish or lacking altogether.

At least one classic example of this happened in the 1950's when a very large, diversified corporation decided to kick its president upstairs to chairmanship of the board, at the same time making its executive vice president, a nationally known figure, president.

Public relations at this company was so well thought of that the head of PR had reached vice presidential status.

However, the change at the top level of management was made without anyone bothering to inform the PR vice president. The first he knew of the change was when, late at night, the Wall Street Journal called him at his house and asked him about it. Obviously at that point he could do nothing but equivocate. This had the net result of making both him and the corporation look foolish in the eyes of the Wall Street Journal. It also brought the PR vice president to the verge of apoplexy. And small

If a company has a full-fledged PR staff or even only a man who handles PR as well as other management functions the company will get its best service from him if he is kept informed up to the minute on what management is up to. Otherwise he is under a severe handicap and, regardless of his talents, not in a position to do thoroughly what he was hired to do: communicate with a company's various publics.

#### Corporate Greenery

It may well be, as Joyce Kilmer wrote, that only God can make a tree. Man, be it added, continues to find new and worthy uses for trees, not the least of which is for landscaping industrial plants.

We don't urge every factory in Connecticut to undertake a program for planting trees around the property. There is evidence at hand, however, from many companies with new and modern buildings that fetching lawns and thoughtful planting of trees have not only helped create better community relations but also make the place look better.

Employees, too, are said to find nicely landscaped factories helpful, both to morale and to the pride they take in working at such industries.

In Connecticut, a lot of our industry is still located in obsolete or obsolescent factory buildings, although management on all sides is making every effort to get out of this 19th Century architecture. It's pretty hard

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to make a factory, circa 1870 and spang in the middle of one of our large cities, look like anything but what it is: a relic of the Grant administration.

On the evidence, though, where management has the chance to make the factory more attractive, trees and lawns are one way to do it. Assuming, of course, that we all believe in good community relations.

Too many people are inclined to overlook or forget the fact that management, just as much as labor, has rights. This forgetfulness, in part, at least, is one reason for the continuing and growing efforts of labor to usurp management rights,

Primarily management rights are wrapped up in the one big bundle of operating policy: how a business is to be run and why. Creating this policy and administering it is management's principal function. Everything else management does is subsidiary to these demands.

From the public relations point of view it is important to bear in mind that in management dealings, or communication, with various state and federal arbitration groups, such groups are more and more likely to rule that unused rights are forfeited. This means

too often that such unused rights are liable to become matters of arbitration when, as a matter of fact, they no more belong in that realm than does the color of a man's necktie.

It is imperative that management use the rights it has. Leaving such rights to gather dust may well mean that ultimately they will be lost.

It is imperative, too, many believe, to start now to recapture any perquisites management may have lost during the years of the reckless ascendancy of organized labor. This can be done by applying such rights to questions of arbitration in a direct and unequivocal manner. Once such rights are successfully reestablished they must be used and not allowed to deteriorate again.

Finally, as we have written before, be sure your foremen are fully informed about policy and that, above all, they know what management's rights are and are willing to fight for them.

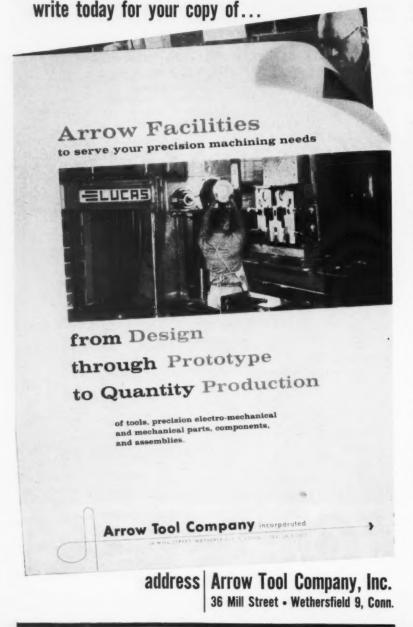
#### Opening Doors to the Unknown

(Continued from Page 9)

man's thinking power. Quantum is now installing an IBM 1620 computer in its industrial computer center. This will enable data processing, physical science engineering calculations, marketing analysis, forecasting potentialities of designs and products, computing actuarial work for insurance, preparation of status reports in transportation and other areas.

The three officers of Quantum, Inc., Dr. C. M. Doede, President, (Mrs.) Dr. D. R. Doede, Treasurer and A. D. Thomas, Secretary, all agree that the team approach works best in research and development. This is the method used by Quantum. Hence, a group of scientists specialized in certain fields enrich each other's ideas by bringing their particular knowledge to bear on problems of other disciplines. Often, the most effective solutions and answers come from outside the area in question.

To assist the industrial community, Quantum sponsors symposiums which have been held in Connecticut and Massachusetts. The last two were titled, "Plastics in the 'Sixties'" and "Growth Through New Products." Isaac Newton said many years ago, "We are merely picking up pebbles on the beach while the great ocean of truth lies undiscovered before us." His words still apply in our modern technological age. What is happening at Quantum and in the field of research and development proves the truism that one great discovery merely opens the door to other unknowns.





#### Separated yet Unified-by Plasticrete Masonry Bloc

PROBLEM: The modern branch bank requires an especially efficient layout if it is to reflect the parent bank's service features as completely as possible, under conditions of relatively compact space and staff. — When the SECOND NATIONAL BANK OF NEW HAVEN planned an office in Hamden (their fourth branch, opened recently) they sought an arrangement that would both simplify operation and supervision, facilitate a certain functional overlapping of personnel, and at the same time allow customer and employee alike the comfortable "feel" of spaciousness.

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#### How Would You Decide?

By LEON L. LEMAIRE Attorney

#### ♦ IN computing "average hourly piecework earnings," may the company include earnings on an "off-standard" job?

Here's what happened.

The claimant was a "press operator" who successfully bid into the combination job of "mixing" and "calendering." The mixing work which was done part of the time was on standard. The calendering work was off standard and had to be paid for by the company "on the basis of average hourly piecework earnings for the previous pay period." How this average is to be computed is stated in the contract:

"The average hourly piecework rate shall be computed by dividing the total piecework hours worked in the previous pay period into the total piecework earnings for the same period."

Waiting time and day work were specifically excluded from the computation. During the first week on his new job, the grievant was paid for the calendering work on the basis of his incentive earnings on the press operation, and with this the union has no quarrel. He performed no mixing that week. During the second week the company paid for the mixing work according to incentive and for the calendering work according to the incentive earnings on the press operation, and this too was in accord with the union's interpretation. During the third week the company computed his calender earnings by taking the weighted average of the incentive earnings on the mixing work and the calender earnings of the previous week. This the union charges is clearly in violation of the contract, which states that off-standard work is to be paid for on the basis of "their average hourly piecework earnings for the previous pay period."

They argue that the only piecework earnings of the previous pay period were the incentive earnings on the mixing job. The company states that under the contract all earnings received by incentive workers on incentive jobs in the previous pay period are to be included in determining average hourly piecework earnings;

therefore, the computation of the grievant's average hourly piecework earnings for the third week included not only his piecework earnings on the mixing job but his piecework earnings on the calender job. This has been the policy of the company for years. The fact that the parties excluded day work indicates that the computation should include all earnings made on incentive jobs by incentive employees.

#### Are "off-standard" earnings "piecework" earnings?

In the opinion of the arbitrator the parties intended in their agreement that an incentive worker working on an incentive job which, for some reason is not on incentive rate, should have some protection for his opportunity for incentive earnings. To do this the parties agreed that for the hours during which he is off incentive on an off-standard job the incentive employee will be guaranteed the weekly average of his incentive earnings during the previous week. The question is whether or not earnings on an off-standard job are to be considered piecework earnings and included in the total on which the "average hourly piecework earnings" are computed. Earnings on an off-standard job are not straight-time earnings; they are guaranteed incentive earnings paid to an incentive employee working on an incentive job, which for some reason is off-standard. Accordingly, the earnings of an employee on an offstandard, incentive job under the contract are incentive earnings guaranteed him by his incentive activity in the previous week. As such, these earnings fall into "the total piecework earnings" provided for in the contract. The parties agree that in computing average hourly piecework earnings "all waiting time and day work" are to be excluded. Significantly, the parties did not exclude the earnings of an incentive worker working off standard. During the three years that the language has been in the contract the company has included off-standard earnings in the computation of average hourly piecework earnings, and such computations were proper.

May a company suspend an employee pending the outcome of criminal prosecution for activities outside the plant?

Here's what happened.

In early September, 1959, the grievant, who was working on the night shift, received permission to leave the plant to get something to eat. While out of the plant, he got into a fight which led to his arrest and later to his being charged with "rape and indecent assault, sodomy, and impersonating a police officer." Four days later he was suspended from duty "pending a complete investigation into his arrest," and the company "subsequently determined that the grievant be relieved from duty until such time as



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his case was disposed of in a court of law." In January, 1960, he went on trial, but late in March the case against him was dropped because the jury could not agree. He was then reinstated to his position without loss of seniority rights and benefits. The union is asking that he be made whole for the loss of earnings from his suspension early in September, 1959, to his reinstatement at the end of March, 1960. The union asserts that the suspension constituted discipline and that the discipline was imposed "without good and sufficient cause." The company denies that the suspension was "discipline"; rather, it says the suspension was an administrative act and it had the right to suspend the grievant pending an investigation which included waiting the outcome of the criminal proceeding.

#### How long may suspension be imposed?

In the opinion of the arbitrator, circumstances may justify the suspension of an employee pending an investigation of facts which, if established, may support discharge or other discipline; however, such suspension may not run indefinitely. While conceding the right of the company in September, 1959, to suspend the grievant, the company did not have the right to suspend him for nearly seven months nor the right to impose loss of pay on the grievant for the period of his suspension. The charges against the grievant were sufficiently serious to be of legitimate concern to the company and it had a right, if not a duty, to investigate. But to continue the investigation and thus to keep the grievant in "limbo" for nearly seven months was clearly an act of discipline. In view of the fact that the prosecution was ultimately discontinued, discipline of such severity was not justified. There is no way of determining precisely what a reason-able period for investigation is, and the facts in each case will have a bearing upon the determination. Under the circumstances here, a onemonth period was reasonable for investigation. Therefore, the grievant should be made whole for the loss of wages during the period beginning one month after his suspension and terminating with his reinstatement, less any earnings during the period.

# Must an employee accept a transfer to a new position where contract gives him the right to be "laid off" rather than to "bump" into another job?

Here's what habbened.

The claimant was hired in May, 1956, as a Labor Grade 9 in the ship-

ping department. Work in the department declined steadily during 1959. In January, 1960, a further reduction in the amount of work occurred. The grievant was junior man in the department, and his job was taken by a senior man. Meanwhile in December, 1959, a Labor Grade 9 vacancy had arisen in another department. No one had bid for this job, and it was open in January, 1960, when the grievant's tenure in the shipping department was terminated. He was advised that the company planned to transfer him to the open position with no loss in pay. After looking at the job, the grievant rejected the transfer on the ground that he was allergic to potash. When his supervisor asked that he have the allergy verified by either the company's or his own physician, he refused. He asked if any other openings existed and was advised there were none at the time. He then asked to be laid off in accordance with the contract, which provides that an employee displaced by a reduction in the work force or by a senior employee exercising "bumping" rights and who elects not to invoke bumping rights granted him by the contract "shall be laid off for lack of work." Management declined to lay him off, insisting he accept the transfer. The grievant still refused and was severed from the payroll on the grounds that he "left work voluntarily - refused transfer." The union. thereupon, submitted this grievance, claiming a violation of the contract. The company argues the parties have agreed in the contract that "the right of the company . . . to transfer to new duties . . . shall not be limited except as specifically set forth in this Agreement," and therefore, they had the right to insist he accept the transfer.

#### How can the conflict between management's right to transfer and the employee's right to be "laid off" be resolved?

The arbitrator decided that the "bumping" clause must not be interpreted to nullify management's right to transfer employees to new jobs. Simultaneously with the one-man reduction in the shipping department, there existed an opening for one man in another department. No one had bid for or requested this job. Thus, management was free to use the normal device for filling a vacancy, namely, transfer. Here, then, is the crux of the case: Two contract provisions seemingly applicable at the same time, one leading in the direction of layoff, the other towards transfer and reassignment to a new posi-

(Continued on Page 44)

## **Accounting Hints**

Contributed by

The Hartford Chapter National Association of Accountants

## The Handling and Reporting of Business Expenses and Reimbursements

By HEWLETT F. LADD, Tax Manager Price Waterhouse & Co., Hartford Office

♦ OF the recent developments in the field of federal income taxation, few have been the subject of more interest and concern than the Treasury's stepped-up program for the reporting and examination of expense accounts. The published rules, and certain unpublished procedural rules, provide for both an intensive and extensive examination of expense account practices of employers as well as employees. They will affect every business, regardless of size or form, as well as the large number of individuals who incur business expenses.

Traditionally, our self-assessment federal income tax system has been based on the premise that taxpayers are basically honest, and that given a clear expression of the rules they will apply them in good faith to their own situation in assessing their own tax liabilities. The question of whether the new reporting requirements, and the enforcement measures to be taken by the Internal Revenue Service, represent a serious inroad into this timehonored self-assessment system is not pertinent to this article. It is clear that the increased attention of the Service to business expenditures has elicited a certain amount of not unjustified popular support, Accordingly, all businessmen should be interested in any program which will eliminate the abuses of a few which might jeopardize the legitimate deductions of many, for the alternative could be stringent legislative restrictions. It is important, then, that the business community make a sincere effort to comply with the new reporting requirements and maintain adequate records which will relate travel and entertainment expenses to a business purpose.

It should be emphasized that the rules which the Internal Revenue Service will now follow in dealing with employee expense accounts do not represent a change in the law. Business expenses are still business expenses and personal expenses are still personal expenses. There has also been

no change in existing regulations on reporting expense reimbursements in an employee's tax return. An employee must account to his employer or the Government, but not both. If he does account to his employer by "acceptable accounting practices," he need account to the Government only if incurred expenses exceed allowances or reimbursements, and then only if a deduction is sought for the excess. If he does not, reimbursements are taxable to the employee.

The reporting requirements of employers, however, are new.

The 1960 tax returns of corporations, partnerships and proprietors have been expanded to include sections dealing with expense account allowances paid to the 25 highest paid officers of a corporation, or partners of a partnership, or a proprietor and the 5 highest paid employees of a sole proprietorship. Information will be required, however, only for those whose total compensation, including salary and payments directly or indirectly for expenses and other allowances, are in excess of \$10,000. For this purpose, expense account allowances mean amounts, other than compensation, received as advances or reimbursements, and amounts paid by or for the employer for expenses incurred by or on behalf of an officer, partner, employee, or proprietor. All amounts charged through any type of credit card are includible.

#### Questions to be answered on return

The 1960 returns also contain the following questions: "Did you claim a deduction for expenses connected with:

- 1. A hunting lodge, working ranch or farm, fishing camp, resort property, pleasure boat or yacht, or other similar facility? (Other than where the operation of the facility was your principal business.)
- 2. The leasing, renting or ownership of a hotel room or suite, apartment, or other dwelling which was used by customers or officers or employees including members of their families? (Other than use by officers or employees while in business travel status.)
- 3. The attendance of members of families of officers or employees at conventions or business meetings?
- 4. Vacations for officers or employees, or members of their families? (Other than vacation pay reported on Form W-2.)"

An affirmative answer to any of these questions does not mean, says the Treasury, that the deductions claimed for any of these items will necessarily be questioned or disallowed. On the other hand, the absence of a question relating to other similar expenses does not mean that such expenses will not receive consideration upon examination. Though no penalty will attach for failure to answer the questions, such failure may well lead to a thorough examination.

## Instructions issued to IRS field officers

Special forms and instructions have been issued to all field offices of the Internal Revenue Service for the man-



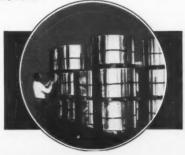
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datory use by agents examining corporate and other employer's returns involving deductions for entertainment, travel and similar expenses. The agent is required to determine whether the employer requires an "accounting" of these expenses, whether he uses acceptable business practices in this respect, and whether expenses include items of a nonbusiness or personal nature which should be charged to the employee as additional income.

The form also requires the agent to inquire into and review some 18 categories of expenses paid by the employer for such "fringe" benefits as the nonbusiness use of yachts, hunting lodges, club dues, purported business trips, autos, beach homes, purchases of articles or services destined for nonbusiness use, and many others. If circumstances warrant, the agent will prepare a list of all officers and employees who received expense allowances or nonbusiness benefits involving amounts meriting further examination. In dealing with closely held corporations, allowances or other benefits given to officer-stockholders may be disallowed to the corporation in their entirety as well as taxed to the recipient, resulting in many instances in a tax in excess of 100% of the amount of the items disallowed.

#### The meaning of an accounting

To "account to an employer" means to submit an expense account or other required written statement to the employer showing the business nature and the amount of all the employee's expenses, including those charged directly or indirectly to the employer through credit cards or otherwise. The amounts should be broken down into such broad categories as transportation, meals, lodging while away from home overnight, entertainment expenses and other business expenses.

Mileage, per diem in lieu of subsistence, and similar allowances providing for ordinary and necessary business expenses in accordance with a fixed scale may be regarded as equivalent to an accounting. However, any employer who grants mileage or per diem allowances in excess of 121/2 cents per mile or \$15 per day must secure a ruling in advance before his plan will qualify as an "accounting." Variations recognizing higher costs in certain localities or number of miles driven during a given period may be acceptable, but variations based on grade or salary will not qualify. Flat allowances other than the foregoing, which are not accounted for, constitute taxable income to the employee. He must support deductions therefrom in his own tax return, a difficult task at best.

#### No precise formula

No precise formula can be prescribed for record keeping. As a minimum, the records showed disclose: (1) Why — the purpose and relation of the expenditure to the taxpayer's business, (2) Who — the name of the person or persons entertained, (3) When — the date of the expenditure, (4) Where — the place, payee and the nature of the product or service received, (5) How much.

These rules should not be interpreted to mean that an employer must obtain from the employee minute details of each and every expenditure. Unusual items, of course, should be accompanied by explanations and large items should be supported by evidence of payment as well. Thus, information showing the "why, who, when, where and how much?" should be available with respect to all large and unusual items, but in the case of normal routine expenditures, where other facts may be accepted as a guide to their reasonableness, something less than an accounting to the employer should be perfectly acceptable.

The usual internal accounting controls should provide for examination and approval of expense reports by a person to whom the employee is directly responsible.

#### Credit cards

The increasingly widespread use of charge accounts by credit cards or otherwise creates a major problem of expense accounting. The charging of expenses to an employer through credit cards does not of itself constitute an accounting by the employee to his employer as statements submitted for charges ordinarily do not furnish a record or proof that each charge was a proper business expense.

Because of the time interval between the submission of expense accounts and billings from travel and credit organizations, some companies have adopted the procedure of charging all charge account payments to the employees' advance accounts. The employees are then required to make an accounting before the items are cleared out of the advance account and either charged to the employees personally or to an appropriate expense account.

#### **Business versus personal expenses**

The fine line of distinction between ordinary and necessary trade or business expenses and personal benefit and enjoyment is rarely clear-cut. Identical types of expenditures may be bona fide business expenses in one instance and purely personal expenses in another. The most difficult problems arise where there is a mixture of both elements. In each instance, the facts will

govern and it behooves each taxpayer to support the position taken.

It is not possible to measure any incidental personal enjoyment which may be a part of business activities. While some types of business entertaining may be most pleasant, it does not seem reasonable that the host must not enjoy himself in order that the entertainment be tax deductible.

Taxpayers should not be stampeded into foregoing such deductions if an unbiased observation supports the position that the expense incurred is for business purposes. In such instances, the taxpayer should not hesitate to claim and defend business deductions to which he believes he is entitled.

#### Clubs and entertainment twilight areas

Where membership in a club is held for business purposes, the club dues should be deductible as a business expense. Personal use of a club should not be charged to the business, but it is unrealistic to place all the emphasis on the amount of personal use of a club. The "business image" is frequently improved by club memberships. Most club members could easily have lunch elsewhere and reserve the club for business entertaining, but as a practical matter, regular personal use of a club for which no charge is made to the business may raise the individual's personal expenses and result in a business benefit at the same time. A firm may well derive benefits from having its officers attend a certain club and from the incidental contacts made there, but taxpayers should be prepared to produce some demonstrable proof of the value of such con-

#### Company cars

It is not uncommon to provide cars for the business use of executives. While charges should be made for substantial personal use, incidental use may be offset by expenses borne by the employee. Careful analysis may show that driving, supposedly personal, benefitted the business.

#### Fringe-benefit facilities

Planning with respect to facilities covered by the specific questions on the new tax forms should start with the basic question of ownership. Facilities primarily used for business should be held in the business name. Facilities which are largely for personal use might better be held in the name of the individual, with charges made to the business based on business use. Where a company maintains facilities such as a lodge, hotel suite or yacht, there should be a clear written determination by responsible management that such ownership or rental is

a necessary and valuable aid in the business. Rules should be established as to the use of the facilities and a complete log or similar record should be maintained in support of the business purpose of such use.

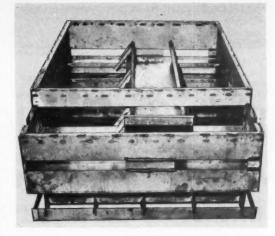
#### **Employee relations**

Each employer organization would be wise to adopt a policy as to how much of the necessary accounting for employee expense it will assume, and how much of the burden it will place on the employee. The setting forth and following of a policy for the employees as to what will be a satisfactory accounting will relieve them of a large part of the reporting problem for federal income tax purposes. Any areas of possible danger that the Treasury Department would contend that additional income was realized should be discussed with the officers or employees involved and steps taken to assist them in compiling and retaining data which would overcome such a contention. The maintenance of a daily diary and record of expenditures should be encouraged.

#### Planning for the future

Many businesses would benefit from a survey of what their policies are, or should be, with respect to expense account reporting and how they are actually carried out. The survey might test the procedures under the Treasury Department's new rules with the attitude of a thorough but not unfriendly Internal Revenue Agent, In many instances, in order to secure an objective viewpoint, such a review can perhaps best be handled by the outside accountants of the business. Relations with stockholders might also benefit from the results of such a

Each company should adopt a clearly stated written policy relative to traveling and entertainment. This statement should define expenses which are reimbursable and non-reimbursable, the nature and extent of entertainment which is expected, including entertainment of other employees, travel and entertainment expenses of wives (generally not deductible unless it can be shown that their presence fulfilled a bona fide business purpose) charges for personal use of company cars or other facilities, expense advances and administrative procedures for reporting, approval and reimbursement including situations where evidence of payment must be furnished. Corporations may also find it desirable to have resolutions defining the obligations of officers to travel or entertain on behalf of the company and the nature of those expenses which will be assumed by the corporation.



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## **Business Pattern**

A comprehensive summary of the ups and downs of industrial activity in Connecticut for the thirty day period ending on the 15th day of the second previous month.

#### Connecticut and U.S. Business Decline



♦ THE Connecticut Index in November decreased to —4.3%, the lowest level since August 1958. As was the case last month, an increase in construction employment was more than offset by decreases in the other three components.

The U. S. Index continued its decline, falling to -4.0% in November. Auto production slackened and steel output hit a low for the year.

The U. S. manufacturing workweek declined to its lowest level in over two years. Industrial production, as measured by the Federal Reserve, fell to a 12 month low. In addition, a recently released survey showed that new plant and equipment expenditures, contrary to earlier expectations, had declined in the third quarter. The survey also indicated that further declines were likely in the next two quarters.

#### Unemployment

Connecticut unemployment rose slightly in November to 58,900 which was 5.4% of the labor force. This number was higher than a year ago, but was well below the 72,800 of November 1958.

Unemployment is up from a year ago in every labor market area, but is below November 1958 in all except three areas. Bristol, with 12.8% of its labor force unemployed in November, continues to show the highest jobless percent. The continuing

low rates reported by Stamford, Norwalk and New London reflect the activity of their technologically advanced industries such as research, electronics, atomic submarines and drugs.

It appears that unemployment in both the state and the nation as a whole will become more serious before there is any improvement. Labor Department officials estimate that U. S. unemployment could come close to 6 million by May or June. This would be a record for the postwar period.

(Continued on Page 60)

## OUT OF SIGHT

MAYBE you have that old business bear by the tail now,

BUT how about hanging onto him in 1961?

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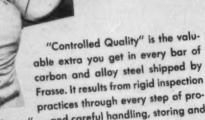


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## Spotlight on the Future

Contributed by National Association of Purchasing Agents By Chester F. Ogden, Manager of Purchases The Detroit Edison Company

#### **General Business Conditions**

♦ OVER-ALL business in 1961 will be better than in 1960, but the present downward drift will continue into the second quarter of the year. This is the consensus of purchasing executives in their semi-annual forecast of what's in store for the nation's economy. A total of 23% predict business in the first quarter of 1961 will be worse than in the last quarter of 1960, while 60% see no change and 17% think it will be better. However, in looking at the first six months of 1961, as compared to the last six months of 1960, 36% see improvement and only 15% predict poorer conditions. The remainder believe we will coast along at present levels.

When they evaluate the year 1961 as a whole as compared to 1960, 46% look for improvement, 41% see no change, and only 13% see it as worse. Despite this belief that we will reach a turning point around midyear, there is no doubt that, at the present time, business is slipping further toward a full-scale recession.

Both our new order and production figures have deteriorated in the last month and are now worse than they have been at any time since the 1957-1958 recession.

In contrast with the 1957-1958 recession, prices have been under pressure and are trending downward this time. Unemployment is becoming a major problem and is expected to be worse as soon as the temporary holiday help is no longer required.

Purchasing executives remain very cautious in their buying policy and most are keeping their forward commitments to a minimum. Along with this, they are making stringent efforts to reduce their inventory of purchased materials further. Comments that accompanied our members' reports, reflected doubt and caution; but, at the same time, they expressed hope and some optimism that soon things would be better. However, most were at a loss in trying to pinpoint just where the stimulation for immediate better business would come from.

(Composite opinion of purchasing agents who comprise the N.A.P.A. Business Survey Committee, whose Chairman is Chester F. Ogden. Vice President, The Detroit Edison Company, Detroit, Michigan.)

#### **Commodity Prices**

Prices continue to drift slightly lower as the result of both keen domestic competition and the threat of foreign imports. This month, 14% of our members report lower prices, 80% say there has been no change, and 6% tell of slight over-all increases. Some specific items have become so competitive, pricewise, that manufacturers state they are booking new buisness at figures that provide no profit at all and in occasional instances result in a loss. This is being done to keep plants busy and avoid laying off trained workers who might not be available later when needed.

#### **Purchased Materials Inventories**

Last month, we reported that some slight additions to purchased inventories had been made. It now appears that, in all probability, this may have been in anticipation of Christmas sales. Whatever the reason, the inventory reduction trend resumed in December. There are 37% of the committee who say they are continuing to cut back on purchased materials on hand, against 13% who tell of additions. An even 50% say they are holding the line at present levels. Comments in their reports indicate that many feel their finished goods inventories are too high and some even tell of drastic price reductions in attempts to reduce them. Until finished goods are moving faster, further reductions in purchased goods inventories can be expected.

#### **Employment**

In September, 1959, largely as a result of the steel strike, the Business Survey Report showed a greater number of purchasing executives reporting employment as worse than reporting it as better. This occurred again in March, 1960, and the breach has been constantly widening since then. For December, we find only 7% indicating any improvement, while 30% say their employment is below last month. Not since early in 1958 has the situation looked as bad. Since this report covers mainly industrial activity, it must be said in all fairness that employment in the retail business has

picked up for the holiday trade. However, none are willing to say that one offsets the other; nor, of course, is the retail pickup anything other than temporary relief.

#### Specific Commodity Changes

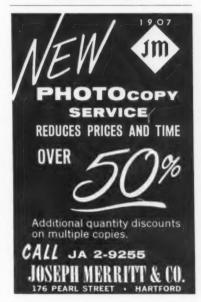
A minimum of specific price activity is reported this month. Even those items appearing as *up* or *down* did not have a lot of support. For several months now, the phthalate family of chemicals has been in short supply and seems to be becoming a perennial on the list.

On the up side are: Tin containers, vegetable oils, and burlap.

On the down side are: Corn starch and lead.

In short supply are: Phthalate plasticizers, phthalic anhydride, and benzol.

(Continued on Page 44)



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# DSC Accutronic® STRIP Scores JOB-PERFORMANCE Bull's Eye on Engine Valve Rocker Arm Stamping





#### FACTS ABOUT THE JOB

The Part: Valve Rocker Arm—Standard in all "sixes" and "eights" used in the leading line of a big 3 car maker.

The Performance Period-1958 through 1960.

The Material—AISI 1010 Cold Rolled Steel Strip .1196" ± .003" x coil, drawing quality, regular satin finish (as supplied by DSC Strip Division).

Functional Requirements—Level gauge and even temper within specified tolerances to permit high speed, non-stop production; uniform chemical composition and micro structure to permit development of necessary physical properties through heat treatment.

The Operations—Blank (multiple); Multi-station progressive forming and coining dies: re-strike, pierce, heat treat.

Accutronic—A Registered Trademark descriptive of DSC Cold Rolled Sheet and Strip products.

#### A "NO-NONSENSE" JOB

This is a high-speed, non-stop, big run, automated stamping job. Drawn, formed, coined, re-struck and pierced from the blank to final dimensions without trim . . . then heat-treated. Production hinges upon the dimensional and metallurgical consistency of the material. This is a "No-Nonsense" kind of job.

#### MAN-SIZE GAUGE, TOO

It's a fact... most strip makers shy away from gauges as heavy as .1196"... even on less complicated jobs. To DSC Stripmakers, thickness up to .187" (sometimes heavier) is all in the day's work. At the opposite extreme, we roll down to about .010".

#### NO. 1 INGREDIENT OF HIGH JOB-PERFORMANCE

Jobs like this valve rocker arm challenge the tooling and manufacturing ingenuity of the stamper, and the steelmaking skills of the supplier. The No. 1 ingredient of high job-performance, as in this case, is the way buyer and supplier understand each other's problems and work together to solve them.

#### DSC STRIP SERVICE MIGHT HELP YOU, TOO

Have you a stamping or roll-forming job that's made from a blank under 24" wide... one that might benefit through better production and/or lower over-all cost from level gauge, even temper, job-fitted finish? Let's put our heads together. For quick action, call your nearest DSC customer "Rep" or write: Detroit Steel Corporation, Eastern Plant, Box 1789, New Haven 7, Conn.

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## **Business Tips**

## Hedging — A Crutch for Sagging Profits

By THOMAS LEA DAVIDSON Assistant Professor of Marketing

School of Business Administration, University of Connecticut

♦ BUSINESSMEN today are becoming more and more concerned with the tightening profit squeeze. Unable to pass on increased costs to consumers, they are searching for ways to shore up sagging profits. The result is a continuing re-evaluation of all segments of the business operation.

When profits are pinched and when competition prevents price increases, the common tendency is to search for ways to reduce costs. Each expenditure is carefully scrutinized to determine if it can be reduced or even eliminated, Items whose need is not obvious or which can be postponed are especially susceptible. For instance, advertising, research and development, and new equipment expenditures are frequently first to feel the ax.

There is, however, a danger in cost cutting. Except for the elimination of waste, which should always be a major objective of any business, reduction in expenditures means a concurrent reduction in effort. When competitors are aggressive the loss of revenue resulting from reduced effort, especially in the long run, can easily exceed the reduction in costs. Many companies have found that the solution to the profit squeeze is not to reduce effort but rather to constructively increase it.

The purpose of this brief comment is to suggest one possibility, frequently overlooked by many manufacturers, wherein additional expenditure of effort may result in increased profits. This possibility is the use of hedging.

Hedging, as it is used here, is defined as the taking of a position in the futures market that corresponds, but is opposite, to a position taken in the cash or physical market. For instance, if a leather tannery purchases

actual hides from a grower so that it now has uncommitted hides in inventory, its hedge would consist of selling an equal amount of hides futures. Conversely, if the leather tannery agreed to deliver actual hides to a shoe manufacturer sometime next year but did not already have hides in inventory to fill this order, its hedge would consist of a purchase of hides futures.

To understand the reasoning behind hedging, one must understand the nature of management decisions.

The most pervasive characteristic of managerial decision making is imperfect knowledge of the future. Because they are forced to make decisions without complete information as to future events, managers are continually confronted with risk and uncertainty. In fact, mere ownership by itself creates risk,

The risks which a business manager faces are numerous and varied. Some of these, such as fire, theft, wind storm or liability, can be protected against through the use of commercial insurance. For other risks, however, no such protection is available. One of the latter is the risk of a change in price.

If a person owns a commodity, he also "owns" the risk that the economic worth or the price of that commodity may change. If a copper manufacturer buys a carload of copper scrap (approximately 25 tons) and then the price goes down by only a half cent per pound before he can resell it he has suffered a loss in the value of his copper of \$250. In a competitive market such as exists for copper, the margin of profit usually is rather small. Scrap and end product prices tend to fluctuate together and the futures market reflects these changes quite rapidly. The result of a change in the cash price of his copper may not only wipe out his expected net profit but may create a loss which impairs his capital position.

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## **NEW HAVEN TERMINAL, INC.**

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This article is based in part on the published proceedings of a symposium entitled The Problem of the Free Markets and the Role of the Commodity Exchanges in the American Economy. In addition to the brief descriptions of some of the commodity exchanges, these proceedings contain discussions on their functioning, hedging, futures trading, and other related topics. A few copies of these proceedings, which were edited by Professor Davidson, are available and may be procured by contacting him at the University.

The same type of risk can occur if a dealer agrees to sell a commodity which he has not yet purchased. The same copper manufacturer may find that in order to keep up his volume, he must agree to sell copper ahead to some large consumer or distributor with actual delivery to take place several months in the future. To remain competitive and keep his usual outlets, he will sell ahead making due allowance for the cost of carrying the copper until the later period. If the price goes up by the same one half cent a pound as mentioned above before he actually buys the copper, he again will lose \$250 per car.

In either of the two foregoing examples the dealer needs protection against both of these losses. Hedging could have provided this, By hedging he could have maintained his purchases and sales but would have offset them by futures market transactions that would have left his commodity net worth at zero. By keeping his inventory or commitments of actual copper at all times around the zero level, he reduces his price risk as it relates to outright price changes and confines his risk to the basis, the difference between the current and the futures price, which is usually much less volatile and risky. As long as the basis remains unchanged, he will not care what happens to price.

An example of a copper hedge will illustrate the value of this process.

On any given day a copper smelter buys 500 tons of scrap at a price of  $23\psi$  per pound. At this time the sales organization has procured orders for only the product of 100 of these tons, so the rest is hedged.

#### **Transactions**

Buy 400 tons of uncommitted scrap at 23 cents per pound.

Processes 350 tons of copper for cost of 2¢ per pound.

Total cost: ..... \$ 14,000

Total cost of copper: .... \$198,000

Sells 14 contracts (350 tons) of futures (1 year ahead) for 29 cents per pound.

Total value: ..... \$203,000

After 90 days sells 350 tons of copper at 27 cents per pound.

Buys 14 contracts same futures at 26.5 cents per pound.

 Net profit on both transactions:

\$7,800

One can see from the foregoing example that an expenditure of \$700 in commissions resulted in a profit of \$7,800, instead of a loss of \$9,000. This amounted to a net gain of approximately \$16,800, or an amount 24 times the cost.

Frequently, the reason given for not hedging is that a manufacturer believes that the use of the futures market involves speculation. What is not understood is that not hedging is also speculation, speculation that the price will remain the same. In fact, because the cash price tends to be more erratic than the difference in the cash and futures prices, not to hedge often involves more risk than to hedge.

Obviously, the use of the futures market requires careful and intelligent study. The purpose of this article is not to indicate that anyone or everyone should trade in futures contracts. Rather it is to suggest that for many manufacturers who are not now hedging, the use of this form of insurance could easily result in increased profits.

#### America Wake Up

(Continued from Page 14)

What I have said here to the America I love and admire applies no less to all other free nations, my own among them. Freedom has become indivisible. To settle for a world half-slave, half-free is the surest road to surrender. The new barbarians cannot be bought off or contained. They must be defeated. This can still be done without a nuclear showdown — by an all-out offensive in the fields of propaganda, economic aid, public education and, in general, fighting fire with fire in every part of the globe.

We can yet drive the Reds in their turn onto the defensive. There are plenty of weaknesses and vulnerable spots in the Communist camp — and we can exploit every one of them. We can turn the Communists' own weapons, including infiltration and subversion, against them. We can create "crises" in their home territory, instead of waiting passively for crises in ours. We can train specialists in every branch of cold warfare instead of relying on amateurs. We can keep alive the hope of release from servitude among our enslaved brothers under the Communist yoke.

Appeasement is as futile in a cold war as it has proved to be, through-

out the ages, in hot war. Continued apathy, or half-measures, in the struggle now under way will only encourage the Communists to underrate our will to resist, thus eventually crowding us into a corner where we will have to choose between nuclear war and surrender.

The only possible solution is to wage this protracted conflict twice as hard, twice as effectively, as the Communists are now waging it. We must embark on a massive offensive, turning every Communist trick and stratagem — from propaganda to infiltration — against our mortal enemy. This is the one and only way to win the struggle for survival.

#### How Would You Decide?

(Continued from Page 34)

tion. It is customary, in contract construction, to avoid an interpretation which would render meaningless or nullify part of the agreement. It is the parties' intent - as gathered from the entire document - which must prevail. It seems most unlikely that the parties designed their lay-off clause in order to frustrate normal work reassignments. The purpose of the bumping clause is to protect and preserve employment opportunities of senior employees, while at the same time permitting them to accept a layoff rather than displace some other employee. But in January there was a legitimate opportunity for reassignment for which management, not unreasonably, chose the grievant. Under the circumstances management did not act improperly in insisting he accept the transfer unless he had appropriate reasons for declining. The grievant's statement that he was allergic to potash cannot be accorded much weight in view of his refusal to submit to a medical check-up.

#### Spotlight on the Future

(Continued from Page 41)

#### **Buying Policy**

For the first time since June, 1958, we have no buyers reporting maintenance, repair and operation commitments beyond 180 days. While MRO is traditionally a short-term requirement, there have usually been a few who had more extended commitments. The trend toward shorter forward buying in production materials is also evident again this month. Both the 180-day and the 90-day figures are down from last month, with a corresponding increase in hand-to-mouth buying.

## PRODUCTS AND SERVICES

THIS department, formerly listing only products made in Connecticut (from 1937 through 1959) is now available for listing not only products made in the state but also services available to industry through management, technical research or other service organizations located in Connecticut.

Listing rate, \$6.00 per listing for 12 monthly insertions, effective with the February 1960 issue. Listings are payable annually, in advance, or within 30 days after their first insertion.

Fuller Merriam Company, The (Vitrified, Resinoid Bonded Grinding Wheels & Segments) West Haven

Scovil, Inc., D. & H. (for polishing metals, etc.)

Absorbents
Nielsen & Sons, Inc., John R.
(oil, water, and grease) South Windsor

Accounting Forms Baker-Goodyear Co., The Branford

Accounting Machine Cards Connecticut Printers, Inc. Hartford

Adding Machines
Underwood Corporation Hartford

Adhesives
Polymer Industries, Inc. Springdale
Raybestos Division Raybestos-Manhattan,
1BC. Springdale

Eitel, Walter T. West Hartford

Ads Inc., Div. CSW Plastic Types, Inc. (plates, services) Rocky Hill

Advertising Agencies
Allston, Smith and Somple, Inc.
Brunelle Co., The Charles
Jinford Advertising Agency
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(Industrial) Westport Shenton Co., K. C. (industrial marketing)
Hartford Watson-Manning Advertising (industrial and technical)

Advertising by Representation Hartz-Miller Associates Meriden

Aerosol Containers
Seri-Print, Inc. (silk screen decorating on metal, plastic & glass) Waterby Waterbury

Air Chucks Skinner Precision Industries, Inc., Skinner-Horton Chuck Div. New Britain

Air Compressors Spencer Turbine Co., The

Air Conditioning Contractors
Salmini Co., Inc., J. P. Milford

Air Conditioning Products
Dunham-Bush, Inc. West Hartford

Air Ducts Wiremold Co., The (Retractable) Hartford

Air Heaters—Direct Fired Engineering Corp. S Stamford

Air Impellers The Torrington Mfg. Co. Torrington Air Cylinders Cushman Chuck Co. (rotating) Hartford

Aircraft
Sikorsky Aircraft Division United Aircraft

Corporation (helicopters) Bridgeport

Chandler Evans Corp. (Piston and Jet Engine Accessories — Carburetors, Fuel Controls, Afterburner Regulators, Pumps, Servo-mechanisms and Protek-Plug Dehydrator Agents) West Hartford Consolidated Controls (Pressure & temperature controls) Bethel Fenn Mfg. Co., The (Hardened and Ground Gear assemblies) Rowington Gabb Special Products Inc (filler capspressure fuel servicing systems) Windsor Locks Hamilton Standard Div., United Aircraft Corp. (propellors and other aircraft windsor Locks Aircraft Accessories

Aircraft Engine Timing Tools
Gabb Special Products, Inc. Windsor Locks

Aircraft Engine Details

American Standard Products, Inc. Hartford
Hartford Machine Screw Co., Div. of
Standard Screw Co. Hartford
New Haven Trap Rock Co., The, Machine
Products Div. North Branford
Tag Alloy Welding & Mfg. Co., Inc.
weldments) Glastonbury

Aircraft Engines
Lycoming Division Avco Mfg. Corp. Pratt & Whitney Aircraft Div., United Aircraft Corp. (aircraft) East Hartford

Aircraft Fasteners

American Standard Products, Inc. Hartford
Hartford Machine Screw Co. Div. of
Standard Screw Co. Hartford
Scovill Manufacturing Co. (PANELOC Aircraft Fasteners) Waterbury

Aircraft Instruments Gorn Electric Company, Inc. Lewis Engineering Co., The Stamford Naugatuck

McMellon Bros., Inc. Bridgeport

Aircraft—Repair & Overhaul irport Department Pratt & Whitney Air-craft Div. Rentschler Field East Hartford

Aircraft Studs & Bolts
American Standard Products, Inc. Hartford
Hartford Machine Screw Co., Div. of
Standard Screw Co. Hartford

Aircraft Wire & Cable Lewis Engineering Co., The Naugatuck

Aircraft Test Equipment
United Manufacturing Co., Division of The
W. L. Maxson Corp.

Alumilite Aluminum Sheets Leed Co., The H. A. Hamden

Aluminum Awnings
Norlee Aluminum Prod. Corp. Bloomfield

Aluminum—Bar, Rod, Sheet, Plate Frasse & Co., Inc., Peter A. Hartford

Aluminum Bronze Castings Knapp Foundry Company, Inc. Guilford

Aluminum Castings

Eastern Malleable Iron Company, The
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West Haven

Aluminum Die Castings Mt. Vernon Die Casting Corporation Mt. vernon Die Casting Corporation
Stamford
Peasley Products, Inc.
Peerless Aluminum Foundry Co., Inc.,
(permanent mold) Bridgeport
Stewart Die Casting Div. Stewart-Warner
Corp.
Bridgeport

Aluminum Foil Republic Foil, Inc. Danbury

Aluminum Forgings
Consolidated Industries, Inc. West Cheshire
Scovill Manufacturing Company Waterbury Waterbury

Aluminum Ingots Batchelder Co., Inc., Charles Lapides Metals Corp. Newtown

Aluminum Sand Castings
Bridgeport Deoxidized Bronze Corp.
Bridgeport Peerless Aluminum Foundry Co., Inc., Bridgeport

Aluminum—Sheet and Rod Scovill Manufacturing Company W Waterbury

Aluminum—Sheets & Coils
United Smelting & Aluminum Co., Inc.
New Haven

Aluminum Windows
Norlee Aluminum Prod. Corp. (combination and prime) Bloomfield

Ammunition Remington Arms Co., Inc. Bridgeport

Fenn Mfg. Co., The (Dow 17) Newington

All-Brite Chemical Corp.
Aluminum Finishing Co,
Contract Plating Co,, Inc.
Leed Co, The H. A.
Stamford Polishing & Plating
Stamford Polishing & Plating
Stamford

Anodizing Equipment
Enthone, Inc. New Haven

Asbestos Auburn Manufacturing Company, The (gas-kets, packaging, wicks) Middletown

Asarcon Bronze Derby Castings Company, The Seymour Knapp Foundry Company, Inc. (bushing & bearing stock)

Guilford

Assemblies—Special Custom Products Corp Bridgeport

Assemblies—Small
American Standard Products, Inc. Hartford
Barnes Co., The Wallace Div. Associated
Bristol American Standard Products, Inc. Hartford Spring Corp.
Custom Products Corp Greist Manufacturing Co., The Hartford Machine Screw Co., Standard Screw Co. Standard Screw Co. Standery Humason, Inc.
Waterbury Pressed Metal Co.

Audio-Visual Equipment
HB Motion Picture Service (rental & service, projection and sound)
New Haven Victor Animatograph Corp, a div. of Kalart (16mm sound and silent projectors; 35mm filmstrip and sound slide film projectors) Plainville

Automatic Buffing & Polishing Machines Harper Buffing Machine Company, The East Hampton

Auto Cable Housing Wiremold Company, The Hartford

Automatic Control Instruments
Bristol Co., The (temperature, pressure, flow
humidity, time) Waterbury

Automobiles—Children's Powercar Company Mystic

Automotive Bodies Metropolitan Body Company Bridgeport

Automotive Leasing Motorlease Corporation, The West Hartford

Automotive Parts
Bridgeport Thermostat Div. RobertshawFulton Controls Co. (automobile thermoMilford stats)
Echlin Mfg. Co., The (Ignition & Brake)
Branford Eis Automotive Corp. (Hydraulic Power and Mechanical) Middletown Mechanical)

Raybestos Division of Raybestos-Manhattan,
Inc., (Brake Lining, Lined Brake Shoes,
Clutch Facings, Automatic

Transmission
Bridgeport

Terryville Manufacturing Co. (Stampings for automotive parts) Terryville

Automatic Polishing and Buffing Equipment Meriden Automotive Tools
Eis Automotive Corp. (Brake Tools) Middletown

Bag Sealing Machines
Derby Sealers, Inc. Derby Bakelite Moldings Watertown Mfg. Co., The

Watertown

Abbott Ball Co., The (steel bearing and bur Abbott Ball Co., The (steen bearing and bunishing)
Hartford Killan Steel Ball Corp., The Hartford Killan Steel Ball Corp., The Hartford New Departure Div. of General Motors (steel and steel alloys)
Pioneer Steel Ball Company, Inc. (steel for bearings, burnishing, graining; also brans, bronze and stainless)
Unionville Superior Steel Ball Co., Inc., (steel bearings & burnishing material)
New Britain

Band Saw Machines
Thompson & Son Co., The Henry G. (auto-

Abbott Ball Co., The (burnishing and tum-Hartford biling)
Enthone, Inc. (tumbling)
Esbec Barrel Finishing Corp (burnishing
Byre Haven tumbling) Byram

Baskets-Wire Fairfield

Bead Chain Bead Chain Mfg. Co., The Bridgeport

Shelton

Auto-Swage Products, Inc.

Bearings (ball & spherical)
Bridgeport
Bridgeport Barden Corporation, The (ball)
Barden Corporation, The (ball)
Britan
Marlin-Rockwell Corporation
New Departure Div. of General Motors (ball)
Bristol

Norma-Hoffman Bearings Corp. (ball and Stamford roller) Torrington Co., The Torrington

Bridgeport Thermostat Div. Robertshaw-Fulton Controls Co. Milford

Bellows—Metallic dgeport Thermostat Div. Robertshaw Tulton Controls Co. Milfor Bridgeport

Bells Bevin Brothers Mfg. Co. N. N. Hill Brass Co., The East Hampton East Hampton

Hartford Belting Co. Hartford Russell Mfg. Co. (High Speed Endless, Laminated Rubber, Roll Stock all types)

Middletown

Bends—Pipe or Tube National Pipe Bending Co., The New Haven

Bicycle Sundries
Torrington Co., The Torrington

Blacking Salts for Metals
Du-Lite Chemical Corp. Middletown
Enthone, Inc. New Haven Enthone, Inc. Mitchell-Bradford Chemical Co. New Haven Milford

Black Oxide Finishing
New Britain Black Oxide, Inc.

Black Oxide Treatment
Bennett Metal Treating Co., The Elmwood

Blades ell Manufacturing Company, Metal Division (hack saw and band saw) Hartford Canewell

Blast Cleaning Equipment
Pressure Blast Mfg. Co., Inc., (Wet and Dry and Abrasives)

Manchester

Howard Company (cupola fire clay)
New Haven

Blower—Centrifugal Type
Spencer Turbine Co., The Hartford

Blower Fans Colonial Blower Company Spencer Turbine Co., The Plainville Hartford

Blower Systems Colonial Blower Company Plainville Ripley Co.

Blower Wheels
Torrington Manufacturing Company, The
Torrington

Blueprints and Photostats
Joseph Merritt & Co. Hartford

Blue Printing Machines
Rotolite of New England Glastonbury

Bollers Bigelow Co., The New Haven

Bolts and Nuts
Clark Brothers Bolt Co.
Hartford Machine Screw Co., Standard Screw Co.
Torrington Co., The Milldale Hartford

Atrax Company, The (solid carbide) Newington

Feldman Glass Co., The New Haven

Bottles—Cosmetic
Seri-Print, Inc. (cosmetic aerosol
ceramic decorating) W Waterbury

Box Board Bird & Son, Inc.
Continental Can Co., Boxboard and Folding
Carton Division
Federal Paper Board Co., Inc.
Montville, New Haven
Lydall & Foulds Paper Co., The
Manchester
New Haven Board & Carton Co., The
Rebestern Paper Roy Co.

Robertson Paper Box Co. Montville Bird & Son, Inc. (corrugated, solid fibre, cleated containers)

Connecticut Container Corporation

New Haven

Ontinental Can Co., Fibre Drum and Corrugated Box Division Portland Merriam Mfg. Co. (steel cash, bond, security, fitted tool and tackle boxes) Durham Warner Bros. Co., The (Acetate, Paper, Acetate and Paper Combinations, Counter Display, Setup)

Boxes and Crates
City Lumber Co. of Bridgeport, Inc., The
Bridgeport

Boxes-Folding Leshine Carton Co. Branford

Boxes—Metai

Durham Mfg. Co. (Bond and Security, Cash and Utility, Personal Files and Drawer Safes)

Seovill Manufacturing Company (aluminum, brass, bronze, copper-cosmetic, drug, hair pin, ointment, pill, powder, rouge, vanity)

Waterbury

Boxes—Paper—Folding

Atlantic Carton Corp.
Bridgeport Paper Box Co. Bridgeport
Carpenter-Hayes Paper Box Co., Inc.
Cartenter-Hayes Paper Box Co., Inc.
Continental Can Co., Boxboard and Folding
Carton Division
Curtis & Sons, Inc., S. Sandy Hook
Folding Cartons Incorporated
Ing)

H. J. Bristol
Div. Federal Paper Curtus
Folding Cartons
Ing)
Mills, Inc., H. J.
National Folding Box Co., Div. Federal Paper
Board Co., Inc. (paper folding)
New Haven and Versailles
New Haven Board & Carton Co., The
New Haven
Paper Box Co.
Montville
Bridgeport

Boxes—Paper—Se Bridgeport Paper Box Co. Heminway Corporation, The Mills, Inc., H. J. Strouse Adler Company, The Warner Bros. Co., The Bridgeport Waterbury Bristol New Haven Bridgeport

Brake Cables Eis Automotive Corp.

Middletown

Brake Linings
Raybestos Division of Raybestos-Manhattan,
Inc. (Automotive and Industrial

Bridgeport Fused Fabric, Middletown Russell Mfg. Co. (all types, Durak, Wireback, Extruded)

Brake Service Parts
Eis Automotive Corp. Middletown

Brass & Bronze

American Brass Co., The (sheet, wire, rods.

Waterbury

Mills Company (coli, tubes)

Bridgeport Rolling Mills Company (coi.,
Bridgeport sheet, strip)
Bristol Brass Corp., The (sheet, wire, rods)
Bristol Chase Brass & Copper Co. Waterbury
Miller Company, The (phosphor
brass in sheets, strips, rolls) Meriden Scovill Manufacturing Company Waterbury Tinsheet Metals Co., The, (sheets and rolls) Waterbury

Brass & Bronze Ingot Metal
Mitchell Smelting & Refining Co., Inc.
Botsford Whipple and Choate Company, The Bridgeport

Brass, Bronze, Aluminum Castings
Coggins Mfg. Co., The J. B. Meriden
Derby Castings Company, The
Victors Brass Foundry, Inc. Gullford

American Brass Company, The Rostrand Mfg. Co., The (Ecclesiastical Brass Wares)

Wares)

Antique Company (to order)

Wareshury Company (to order) Wares)
Scovill Manufacturing Company (to order)
Waterbury

Brass Mill Products
American Brass Company, The
Chase Brass & Copper Co.
Plume & Atwood Mfg. Co., The
Scovill Manufacturing Company
Seymour Manufacturing Co., The Waterbury Waterbury Thomaston Waterbury Seymour

Donnelly Brick Co., The New Britain Stiles Corp., subsidiary of Plasticrete Corp. North Haven

Bricks-Fire Howard Company New Haven
Mullite Works Refractories, Div. H. K.
Porter Co., Inc. Shelton

Sargent & Company (Screw Eyes, Screw Hooks, Cup Hooks, Hooks and Eyes, C. H. Hooks)

Bronze & Aluminum Castings
Knapp Foundry Company, Inc. (rough or
machined) Guilford

Bronze Sand Castings Bridgeport Deoxidized Bronze Corp. Bridgeport

Brooms—Brushes
Fuller Brush Co., The East Hartford

Hawie Mfg. Co., The
North & Judd Manufacturing Co.
New Britain
Waterbury

Buffing & Polishing Compositions Apothecaries Hall Company, Division The Hubbard Hall Chemical Company Waterbury Lea Mfg. Co. Waterbury

Burglar Alarm Systems Mosler Research Products, Inc. Danbury

Dorset-Rex, Inc., Subsidiary of Frary & Clark Landers Thomaston

Burners—Automatic Peabody Engineering Corp. Stamford

Burners-Coal and Oil Peabody bined) Engineering Corporation Stamford

Burners—Gas and Oil Engineering Corporation Peabody Stamford bined)

Burners-Refinery Peabody Engineering Corporation (For Gas and Oil) Stamford

Burnishing

Abbott Ball Co., The (Burnishing Barrels and Burnishing Media)

Ploneer Steel Ball Company, Inc (balls, cones, other metallic shapes)

Unionville

Burs Atrax Company, The (carbide) Newington Pratt & Whitney Co., Inc. (carbide and HSS) West Hartford

Business Forms Connecticut Manifold Forms Co., The West Hartford

Business Counsellors
Wirth Management Company Wilton

Frank Parizek Manufacturing Co., The Putnam Schwanda & Sons, B. (ocean pearland plastic) Staffordville Scovill Manufacturing Company (Uniform and Tack Fasteners) Waterbury Waterbury Companies, Inc. (Uniform and Fancy Dress)

Button Head Socket Screws Holo-Krome Screw Corp. West Hartford

Cabinet Work Hartford Builders Finish C Hartford

Cable—Asbestos Insulated Rockbestos Wire & Cable Co., Dlv. Cerro de Pasco Corp. New Haven

General Electric Company Bridgeport

Cable—Nonmetallic Sheathed General Electric Company Brid Bridgeport

Hendryx Co., The Andrew B. (bird and nimal)

American Cam Company, Inc.
Bristol Instrument Gears, Inc.
Hartford Special Machinery Co.,
Hartford

Cams, 2 Dimensional
Mallory Industries, Inc West Hartford
Parker-Hartford Corporation Hartford

Cams, 3 Dimensional
Mallory Industries, Inc. West Hartford
Parker-Hartford Corporation Hartford

Capacitors
Electro Motive Mfg. Co., Inc., The (mica & trimmer)

Willimantic

National Die Co., Inc., The Wolcott

Somma Tool Co. (for automatic screw ma-Waterbury

Carbide Shape Dies
Thomaston Tool & Die Co. (any form)
Thomaston

Carbide Tools Atrax Company, The (solid) Precision Tool & Die Co. Newington Waterbury

Carbon Pile Type Resistors
Engineered Metals Manchester

Standard Card Clothing Co., The (for tax-tile mills) Stafford Springs

Wassell Organization, Inc. Westport

Carpenter's Tools
Sargent & Company (Planes, Squares, Plumb
Bobs, Bench Screws, Clamps and Saw
New Haven

Carpets and Rugs
Bigelow-Sanford Carpet Co. Thompsonville

Carton Closure Equipment Better Packages, Inc. ("Tape-O-Matic," "Bet-Shelton ter Pack")

Casket Trimmings
Bridgeport Casket Hardware Co., The
Bridgeport

Bassick Company, The (Industrial and Gen-Bridgeport

Commercial Foundry Co., The (brass, bronze,

Commercial Foundry Co., The (brass, bronze, aluminum)
Connecticut Foundry Co. (grey iron)
Connecticut Malleable Castings Co. (malleable iron castings)
Custom Products Corp (machined only)
Ductile Iron Foundry, Inc. Stratford Eastern Malleable Iron Company, The (malleable iron, metal and alloy) Naugatuck Farrel-Birmingham Company, Inc. (Meehnite Nodular Iron, Steel)
H. R. Engineering Laboratories, Inc. (centrifugal steel mold)
Malleable Iron Fittings Co., malleable iron and steel)
Branford

New England Alloy Casting Corp. Hartford Newton-New Haven Co. (sinc and aluminum) West Haven Nutmeg Crucible Steel Co. (steel) Branford Plainville Casting Company (gray alloy and high tensile irons) Philbrick-Booth & Spencer, Inc. Hartford Producto Machine Company, The Scovill Manufacturing Company (Brass & Waterbury Mfg. Co. The (gray iron.

Scotill Manufacturing Company
Bronze)
Bronze)
Turner & Seymour Mfg. Co., The (gray Iron, semi steel and alloy)
Union Mfg. Co. (grey Iron & semi steel)
New Britain
Waterbury Foundry Company, The (highway & sash weights)
Wilcox Crittenden & Co., Inc., (gray Iron and brass)

Middletown
Middletown
Adyt.) (Advt.)

Castings—Investment Arwood Precision Casting Corp.

Catalog Production Watson-Manning Advertising Stratford

Mullite Works Refractories, Div. H. K. Porter Co., Inc.

Centerless Grinding
Brown Manufacturing Co.
New England Centerless Grinding, Inc.
West
West
Winsted

Ready Tool Co., The (anti friction, carbide tipped, high speed)

Stratford

Centrifugal Pumps
Hamco Inc. (gasoline or electric driven)
New Haven

Cermets
Russell Mfg. Co. (for missiles, and for friction materials) Middletown

Turner and Seymour Mfg. Co., The (weldless sash, jack, safety, furnace, universal, lion and cable)

Torrington

Auto-Swage Products, Inc.

Shelton Chain—Power Transmission and Conveying Whitney Chain Co., The, Subsidiary of Foote Bros. Gear and Machine Corp. Hartford

The Hitchcock Chair Company Riverton

Carwin Company, The North Haven

Chemicals

Apothecaries Hall Company, Division The
Hubbard Hall Chemical Company
Waterbury Axton-Cross Co.
Carwin Company, The
Enthone, Inc.
Fuller Brush Co., The (for cleaning and
maintenance—cleaners, deodorants, detergents, disinfectants, dust absorbers and
polishers)

Shelton
New Haven
New Haven
New Haven gents, disinfectants, dust polishers) Macalaster Bicknell Company MacDermid Incorporated
Naugatuck Chemical Division
Rubber Co.
New England Lime Company
Pfizer & Co., Inc., Chas.
United States
Chemical Corp.
New Haven

Chemicals—Agriculture
Naugatuck Chemical Division United States
Rubber Co. (insecticides, fungicides, weed
killers)

Chemists—Analytical and Consulting Bridgeport Testing Laboratory, Inc. Bridgeport

Christmas Light Clips Foursome Manufacturing Co. Bristol

Chromium Plating
Chromium Corp. of America
Chromium Process Company, The Waterbury

Cushman Chuck Co., The
Jacobs Manufacturing Co., The
chucks, lathe collet chucks and arbors)
West Hartford Skinner Precision Industries, Inc.,
Skinner-Horton Chuck Div. New Britain
Union Manufacturing Company
New Britain

Cushman Chuck Co., The Power Grip, Inc. Rockfall Skinner Precision Industries, Inc., Skinner-Horton Chuck Div. New Britain

Chucks-Drill Jacobs Manufacturing Co., The West Hartford

Chuck & Face Plate Jaws
Cushman Chuck Co., The
Skinner Precision Industries, Inc.,
Skinner-Horton Chuck Div, New Britain Skinner-Horton Chuck Div. Union Manufacturing Company New Britain

Chucks—Lathe
Cushman Chuck Co. (power and hand open Hartford Skinner Precision Industries, Inc., Skinner-Horton Chuck Div. New Britain

Cushman Chuck Co., The Hartford Skinner Precision Industries, Inc., Skinner-Horton Chuck Div. New Britain Skinner-Horton Chuck Div. New Britain Skinner-Horton Chuck Div. New Britain Union Manufacturing Company New Britain

Clay Howard Company (Fire Howard "B" and High Temperature Dry) New Haven

Cleaning Compounds nc. (Industrial) New Haven Enthone, Inc. (Industria MacDermid Incorporated Waterbury

Clock Mechanisms Lux Clock Mfg. Co., The Waterbury

Clocks
Ingraham Co., The Bristol ited States Time Corporation, The Waterbury Bristol

Clocks—Alarm Lux Clock Mfg. Co., The Waterbury

Clocks—Automatic Cooking
Lux Clock Mfg. Co., The Waterbury

Clutches Snow-Nabstedt Gear Corp., The New Haven

Raybeston Division of Raybestos-Manhattan. Inc. (Molded, Woven, Semi-metallic and Full-metallic) Rridgeport Russell Mfg. Co. (rubber Shock Cord — all sizes and types)

Colls—Electric
Bittermann Electric Company
Rowley Spring Co., Inc., The (Air-wound
for television and electronic industries)

Coils—Pipe or Tube
National Pipe Bending Co., The New Haven
Whitlock Manufacturing Co., The Hartford

Coil Winding Advanced Electronics, Inc (custom) Rocky Hill

Cold Molded Electrical Insulation Meriden Molded Plastics

Communication Systems Hartford Tel-Rad, Inc.

Compacts Scovill Manufacturing Company (powder and

Compressors
Brunner Division of Dunham-Bush, Inc.
(Refrigeration, Air Conditioning and Air
Compressors)
West Hartford
Norwalk Company, Inc. (high pressuse air
South Norwalk

Computers Reflection Electronics, Inc. Royal McBee Corp. Stamford

Concrete Products
Plasticrete Corp. Hamden, Hartford
North Haven, Waterbury, Willimantic

Condenser and Heat Exchanger Tubes Scovill Manufacturing Company Waterbury

Sonoco Products Co. (Climax-Lowell Div) (paper) Mystic

Connector

Gorn Electric Co., Inc. (precision miniature electrical and printed ciruit) Stanford Construction Equipment Trailers
Kensington Welding & Trailer Co., The Co., The Kensington

Consultants

Robotham Co., The Edward W. (advertising & marketing)

Consulting Engineers
Souther Engineering Co., Henry
Stanley P. Rockwell Co., Inc.,
Hartford

Continuous Mill Gages
Pratt & Whitney Co., Inc. West Hartford

Contract Machining

Laurel Mfg. Co., Inc. (Precision Production Small Parts)

Malleable Iron Fittings Company

McMellon Bros., Inc. (precision threaded parts)

Bridgeport

Contract Manufacturers

Advanced Electronics, Inc.
American Standard Products, Inc. Hartford
Contant Products Corp Bridgeport
Bridgeport American Standard Products, Bridgeport Custom Products Corp.
Dorset-Rex, Inc., Subsidiary of Landers, Frary & Clark
Frany & Clark
Fenn Mfg. Co., The (Precision Machine NewIngton Medine NewIngton Medine) Works)
Greist Mrg. Co., The (Metal parts and assemblies)
Hartford Machine Screw Co., Div. of
Standard Screw Co. Hartford
Merriam Mrg. Co. (production runs—metal
boxes and containers to specifications)

Scovill Manufacturing Company (metal parts and assemblies) Waterbury Div. Howe Sound Co. Danbury Torrington Co., The Voss Co., The Torrington

Controllers

Bristol Company, Waterbury

Controls-Remote

Panish Controls (Remote Controls for Marine & Aeronautic Applications) Bridgeport

Controls—Remote Hydraulic Sperry Products Co., Div. Howe Sound Co. Danbury

Converters DC to AC Electric Specialty Co. Stamford Safety Electrical Equipment Corp. New Haven

Conveyor Systems
Leeds Conveyor Mfg. Co. The East Haven
Production Equipment Co. Meriden

Copper
American Brass Corp., The (sheet, wire, rods, tubes) Waterbury Bristol Brass Corp., The (steel) Bristol Chase Brass & Copper Co. (sheet, rod, wire, waterbury chase Brass & Copper Co. (sheet, rod, wire, waterbury) tube)
Tinsheet Metals Co., The (sheet and rolls)
Waterbury

Copper Castings Knapp Foundry Company, Inc. Guilford

Copper Sand Castings Bridgeport Deoxidized Bronze Corp Bridgeport

Copper Sheets American Brass Company, The New Haven Copper Co., The Waterbury Seymour

New Haven Copper Co., The Seymour

Copper Water Tube American Brass Company, The Waterbury

Copying Machines
Thermo-Fax Sales of Conn., Inc.
New Haven

Russell Mfg. Co., The (marine & aero shock) Middletown

Cord Sets—Electric Company Seeger-Williams, Inc. Bridgeport

Cork Cots Sonoco Products Co. (Climax-Lowell Div.) Mystic

Corn Cob Meal
Nielson & Sons, Inc., John R. (Graded)
South Windsor

Wassell Organization, Inc. Westport

Corrugated Box Manufacturers Connecticut Container Corporation New Haven Corrugated Containers, Inc. Hartford

Corrugated Shipping Cases

Connecticut Container Corporation New Haven
Continental Can Co. Fibre Drum and
Corrugated Box Division Portland
D. L. & D. Container Corp. New Haven
New Haven Board & Carton Co.
New Haven New Haven

Cosmetic Containers

Dorset-Rex, Inc., Subsidiary of Landers, Frary & Clark Thomaston Eyelet Specialty Div. International Silver Co. Wallingford Co.
Lakewood Metal Products, Inc. Waterbury
Seovill Manufacturing Co. Waterbury
Seri-Print, Inc. (silk screen decorated)
Waterbury

Chesebrough-Pond's, Inc. Fuller Brush Co., The Clinton East Hartford

Veeder-Root, Inc. Hartford

Couplings
Scoviil Manufacturing Company( garden and Waterbury Waterbury

Cushioning for Packaging
Gilman Brothers Co., The Gilman

Cutters

Atrax Company, The (solid carbide) Newington Hanson-Whitney Co., The (thread milling) Hartford Mitrametric Co., The (ground pinlon)
Pratt & Whitney Co., Inc., (Milling Cutters all types carbide and HSS) West Hartford

Cutting & Creasing Rule Bartholomew Co., H. J. Bristol

Data Processing Equipment Royal McBee Corp. Hartford

Decalcomanias Sirocco Screenprints New Haven

Deep Drawings ed Metal Stanley Pressed Metal Terryville Manufacturing Co. New Britain Terryville

Deep Hole Drilling & Reaming Hamden Deep Hole Drilling Co. Products Design & Mfg. Corp. Newington

M. H. Rhodes, Inc. Hartford R. W. Cramer Company, Inc., The Centerbrook

Design

Designers for Business and Industry (product design-appearance) New Haven
Maurice Libson Designer (product styling
& appearance design) New Haven

Maurice Manager design)
& appearance design)
Diamonds—Industrial
Parsons Diamond Products, Inc.
West Hartford
Newington

Russell, Inc., R. K.

Diamond Tools

Parsons Diamond Products, Inc.

West Hartford

Newington

Dictating Machines Dictaphone Corporation Bri-SoundScriber Corporation, The New Bridgeport Mt. Vernon Die Castings
Mt. Vernon Die Casting Co.
Peasley Products, Inc. (aluminum and zine Stamford Newton-New Haven Co., Inc. New Haven Stewart Die Casting Div. Stewart-Warner Corp. Bridgeport

Die Casting Dies Eastern Machine Screw Corp., The New Haven Weimann Bros. Mfg. Co., The

Die Heads-Self Opening
Eastern Machine Screw Corp., The
New Haven
Geometric Tool Division Greenfield Tap &
New Haven

Die Sets Producto Machine Company, The Bridgeport Superior Steel Products Corp. (steel) Cheshire Union Mfg. Co. (precision, steel and semi-steel) New Britain

Hoggson & Pettis Mfg. Co., The New Haven Mitrametric Co., The (ground for gears)
Torrington Pratt & Whitney Co., Inc. (thread cutting and thread rolling) West Hartford

Douglas Co., Geo. M. New Haven

Badio Frequency Co., Inc. New Britain

Sansome Co., S. Frederick (design & prod-Short Beach

Display Containers
National Folding Box Co. Div. Federal Paper
Board Co., Inc. (folding paperboard)
New Haven and Versailles

Displays—Design & Production Ad-Craft Displays, Inc. Bloo Stifel & Kufta New I Bloomfield New Britain

Display Equipment Old Saybrook Polecats, Inc.

Displays—Metal

Durham Mfg. Co., The (Designing to customers' specifications)

Merriam Mfg. Co. (Contract Work to Individual Specifications)

Parsons Co., Inc., W. A. (custom designed)

Durham

Displays—Plastic
Dura Plastics of New York, Inc.
Displays—Wire
J. C. Products, Inc.
Higganum

Diversification Advisors Wirth Management Company Wilton

Door Closers Sargent & Company New Haven

Doors Bilco Co., The (metal, residential and com-mercial) West Haven

Allen Manufacturing Co., The
Hartford Machine Screw Co. Div. of Standard Screw Co.
Holo-Krome Screw Corp., The
Woot Hartford West Hartford Torrington Torrington Co., The

Drafting Accessories
Joseph Merritt & Co. Hartford

Sigourney Tool Co. (sensitive drilling ma-Bloomfield

Drilling Machines
Pratt & Whitney Co., Inc. (Deep Hole)
West Hartford Drilling Service—Hard Steel Walton Co., The West Hartford

Drilling and Tapping Units
Hartford Special Machinery Co. Hartford

Drop Forgings Atwater Mfg. Co.
Billings & Spencer Co., The
Consolidated Industries
Wilcox Crittenden & Co., Inc. Hartford West Cheshire Middletown

Duplicating Machines
Thermo-Fax Sales of Conn., Inc.
New Haven

Duplicating Machines—Automatic & Whitney Co., Inc. West Hartford

**Dust Collectors** Colonial Blower Co. Plainville

Elastic Russell Mfg. Co. (rubber shock cord — all sizes and types) Middletown

Electric Cables

General Electric Company (for residential, commercial and industrial applications)

Bridgeport

Rockbestos Wire & Cable Co. Div. Cerro de Pasco Corp. (asbestos insulated)

New Haven

Electric Cord Springs

-tno Manufacturing Co.

Plainville Bristol Spring Manufacturing

Electric Cords General Electric Company Bridgeport Rockbestos Wire & Cable Co. Div. Cerro de Pasco Corp. (asbestos insulated) New Haven

Electric Enclosed Switches
Arrow-Hart & Hegeman Electric Co., Hartford

Electric Eye Control Ripley Company, Inc. Middletown

Electric Fixture Wire Rockbestos Wire & Cable Co. Div. Cero de Pasco Corp (asbestos insulated) New Haven

Electric Hand Irons Hardware Mfg. Co. (trade mark Winsted Winsted "Durabilt")

Electric Heating Elements
Hartford Hartford Element Co.

Electric Insulation Stevens Paper Mills, Inc., The Windsor

Wasley Products, Inc. Plainville

Electric Motor Controls

Arrow-Hart & Hegeman Electric Co., The
Hurtford

Electric Motor Repair B & J Electric Co. Ansonia

Electric Motors
Electric Specialty Co.
Harvey Hubbell Incorporated
Iona Manufacturing Company, Th Bridgeport Safety Electrical Equipment Corp.
New Haven Manchester U. S. Electrical Motors, Inc. Milford

Electric Switches
Harvey Hubbell, Incorporated Bridgeport

Electric Time Controls Cramer Controls Corporation, Centerbrook

Electric Wire
Rockbestos Wire & Cable Co. Div. Cerro de
Pasco Corp. (asbestos insulated) New Haven

Arrow-Hart & Hegeman Electric Co., The Hartford Harvey Hubbell, Incorporated Bridgeport

Electrical Appliances
Iona Manufacturing Company, The Manchester

Electrical Conduit Fittings & Grounding Specialties
Gillette-Vibber Company, The New London

**Electrical Connectors** Burndy Corporation Norwalk

Electric Control Apparatus
Plainville Electrical Products Co., The
Plainville

Electrical Insulation Case Brothers, Inc. Manchester

Electrical Recorders

Bristol Co., The
Electrical Relays and Controls

Allied Control Co.
Plantsville

Electrical Switchboards
Plainville Electrical Products Co., The Plainville Simsbury Pneumatic Applications Co.

Electrical Wiring Systems
Wiremold Co., The Hartford

Electro Mechanical Prototypes Victor Tool & Mfg., Inc. Higganum

Advanced Electronics, Inc. (custom) Rocky Hill

Electronic Circuits Seri-Print, Inc. (silk screen plates & supplies) W

Patent Button Company, The Waterbury Prentice Mfg. Co., The G. E. (stampings to customers' specifications)
Terryville Manufacturing Co. (Stampings to customer specifications)
Terryville

Electronics Anderson Laboratories, Inc. West Hartford Ripley Co. Middletown Ripley Co. Sturrup Larabee & Warmers, Inc. Middletown Vinco Electronics Corporation New Haven

Advanced Electrones, Inc. (custom)

Rocky Hill Electro-Mechanical Assemblies Kenyon Laboratories, Inc. Deep River

Electroplating
Coggins Mfg. Co., The J. B.
Glering Metal Finishing, Inc.
National Sherardizing & Machine Co.
Hardren Waterbury Waterbury Plating Company

Electroplating—Equipment & Supplies
Apothecaries Hall Company Division
Waterbury Enthone, Inc.
Hubbard Hall Chemical Company, The
Lea Manufacturing Co., The
Waterbury
Waterbury

Lea Manufacturing Co., MacDermid, Incorporated Waterbury

Electrotypes
Barnum-Hayward Electrotype Co., Inc.
New Hayen New Haven Electrotype Div. Electrographic New Haven

Elevators Eastern Elevator Co (passenger and freight)
New Haven
General Elevator Service Co. Hartford

Employment Agencies
Administrative-Technical Personnel Hartford Advancement Opportunities
Burnham Employment Agency (executive, technical, secretarial)
Rita, Richard P. Personnel Services, Inc.
New Haven, Bridgeport & Hartford
Snelling & Snelling

Enameling Giering Metal Finishing, Inc. Waterbury Plating Company Hamden Waterbury

Enamels & Lacquers

Dobbs Chemical Co., The (industrial finishes
to customers' specifications) New Haven

Engineering
Marchant & Minges (building
construction) West Hartford
Research & Development Designers, Inc.
Middletown Technical Design and Development C (design and drafting)

Engineering Service
Lacey Manufacturing Co., The Bridgeport

Atrax Company, The (solid carbide)
Newington

Engraving—Plastic and Nonferrous Metals New England Engraving Company Div. of Dura Plastics of New York, Inc. Westport Pratt & Whitney Co., Inc. (carbide and HSS)
Salisbury Products, Inc.

West Hartford
Lakeville

Envelopes Curtis 1000, Inc. United States Envel Hartford Division Envelope Company Hartford

Environmental Test Equipment American Research Corp. Farm Farmington

Excelsior Nielsen & Sons, Inc., John R. South Windsor

Executive Recruiting Advancement Opportunities Hartford

Ensign-Bickford Co., The (safety fuse, detonating fuse, blasting accessories)

Extensions—Tap
West Hartford

Extractors

Walton Co., The (tap, pipe & stud)

West Hartford

Extraction Service
Walton Co., The (taps, drills, studs)
West Hartford

Extruders and Accessories

Davis Electric Company (Ram Type Teflon
Wallingford
Wallingford Extruder) Wallingford Standard Machinery and Davis-Standard Di-visions of Franklin Research Corp. Mystic

Eyelets American Brass Co., The Waterbury
Arro Eyelet & Tool Co. (small-printed circuit, brass & copper)

Dorset-Rex, Inc., Subsidiary
Frary & Clark
Gem Machine & Tool Co.
Mark Eyelet & Stamping Co.
stampings)

Platt Bros. & Co., The
Waterbury
Waterbury
Waterbury
Waterbury
Waterbury
Waterbury
Waterbury
Waterbury Stevens Co., Inc. Salem Mfg. Co. Prospect

Eyelets, Ferrules and Wiring Terminals American Brass Company, The Waterbu Waterbury

Eyelet Machine Products

American Brass Company, The Waterbury
Ball & Socket Mfg. Co., The
West Cheshire Cold Forming Mfg. Co., The Cly-Del Manufacturing Co. Lakewood Metal Products, Inc. Waterbury Waterbury Waterbury Darset-Rex Inc., Subsidiary
Frary & Clark
National Die Co., Inc., The
Platt Bros. & Co., The
Stevens Co., Inc.
Waterbury Pressed Metal Co.
Waterbury
Waterbury
Waterbury

Auto-Swage Products, Inc. Shelton

Fabricators
Scovill Manufacturing Company (aluminum, brass, bronze, copper, steel) Waterbury

Fabrics
Russell Mfg. Co. (Teflon, Moulded Fabric,
Bearing Surfaces, High Temperature FabMiddletown

Fan Blades
Torrington Manufacturing Company, The
Torrington

Fans-Electric General Electric Company Bridgeport

Fasteners--Aircraft Scovill Manufacturing Company (PANELOC Aircraft Fasteners) (PANELOC Waterbury

Fasteners—Industrial Torrington Co., The Torrington

Fasteners-Laundry Proof Scovill Manufacturing Company (GRIPPER snap fasteners) Waterbury

Fasteners—Slide & Snap
Scovill Manufacturing Company (GRIPPER zippers and GRIPPER snap fasteners)
Waterbury

Felt
Auburn Manufacturing Company, The (mechanical, cut parts) Middletown
Drycor Felt Company (paper makers and in-Staffordville

Felt—All Purpose

American Felt Co. (Mill & Cutting Plant)

Genville

L Sons, Inc. (Mills & Chas. W. House & Sons, Inc. Cutting Plant) Unionville

Ferrules Cly-Del Manufacturing Co. Waterbury

Fiber-glass Fabrication
Davis Co., The E. J. West Haven

Fibre Board Bird & Son, Inc.
Case Brothers, Inc.
Colonial Board Company
C. H. Norton Co., The North
Stevens Paper Mills, Inc., The
Windsor

Fiberglass Products
Fiberglass Products Eng. Co. South Norwalk

Flie Cards
Standard Card Clothing Co., The
Stafford Springs

Filing Equipment Wassell Organization, Inc. Westport Film Processing Machinery Filmline Corporation Milford

Filters-Fluid Aslop Engineering Co. Cuno Engineering Corp., The Milldale Meriden

National Filter Media Corp. (cloth & paper) New Haven

Finger Nail Clippers H. C. Cook Co., The Ansonia

Firearms
Colt's Patent Fire Arms Mfg. Co., Inc.
Hartford Junior Screw Machine Products, Inc. West Haven The Marlin Firearms Co., The O. F. Mossberg & Sons, Inc. New Haven

Fire Alarm Systems
New Haven Fire-Lite Alarms, Inc.

Fabrics Fire Hose (municipal and indus-Sandy Hook

Fireplace Goods
Puritan Fireplace Furnishing Co. Milford

Fireworks M. Backes' Sons, Inc. Wallingford

Flame Hardening
Flame Treating & Engineering Co., The
West Hartford

Flashlights
Bridgeport Metal Goods Mfg. Co. Bridgeport

Flat Head Socket Screws Holo-Krome Screw Corp. West Hartford

Flat Springs
Bristol Spring Manufacturing Co. Plainville
Gemco Manufacturing Co., Inc. Southington

Flatware—Stainless Steel
Majestic Silver Co., The New Haven

Pratt & Whitney Co., Inc. Wes West Hartford

Sansome Co., S. Frederick (parade) Short Beach

Gorn Electric Co., Inc. (for aircraft and commercial use) Stamford

Floor & Ceiling Plates
Beaton & Cadwell Mfg. Co., The
New Britain

Fluorescent Lighting Equipment
Wiremold Company, The Hartford

Foam Rubber
Armstrong Rubber Company, The
West Haven

Forgings
Atwater Manufacturing Co.
Billings & Spencer Company
Bridgeport Hardware Mfg. Corp., Plantsville Hartford The Bridgeport Capewell Manufacturing Company Hartford Chase Brass & Copper Co. Waterbury Consolidated Industries, Inc. West Cheshire Heppenstall Co. (all kinds and shapes) Ideal Forging Corp.
Scovill Manufacturing Company (Non-ferrous)

Briugepoor
Southington
Company (Non-Waterbury Bridgeport

C. & S. Tool Co., Inc. Berlin

Forms
Baker Goodyear Co. (Columnar and Analy-

Baker sis)

Foundries

Connecticut Malleable Castings Co. (malcastings)

Connecticut Malleable Castings New Haven

New Haven

Seymour

Stratford

Stratford

The Iron Connecticut Malleable Castings New Haven
leable iron castings) New Haven
burby Castings Company, The Stratford
Malleable Iron Fittings Co. (Malleable Iron
and Steel Castings) Corp. Hartford
Plainville Casting Company (gray, alloy and
high tensile irons) Plainville Casting Company (gray, alloy and high tensile irons Plainville Producto Machine Company, The Bridgeport Turner & Seymour Mfg. Co., The (gray, iron, semi steel and alloy) Torrington Union Mfg. Co. (gray iron & semi steel) New Britain Wilcox Crittenden & Co., Inc. (Iron, brass, aluminum and bronze) Middletown

Fountain Pens and Mechanical Pencils Waterman Pen Company, Inc. Seymour

John P. Smith Co., The New Haven

Four Slide Forms
Peck Spring Co. Plainville

Fuel Oil Pump and Heater Sets Peabody Engineering Corporation Stamford

Rockwell Co., W. S. (industrial)

Gage Blocks
Pratt & Whitney Co., Inc. (Alloy steel and Carbide, Hoke and USA) West Hartford

Galvanizing
Malleable Iron Fittings Co. Branford
Wilcox Crittenden & Co., Inc. Middletown

Garment Accessories
Oakville Co, Div. Scovill Mfg. Co. Oakville

Gaskets Auburn Manufacturing Company, The (from all materials) Middletown Fitzgerald Manufacturing Co. Torrington

Gaskets-Metallic Laminated Shim Company, Inc. Glenbrook

Gas Scrubbers, Coolers and Absorbers Peabody Engineering Corporation Stamt

Gauges
Bristol Co., The (pressure and vacuum-recording automatic control) Waterbury
Helicoid Gage Division American Chain &
Cable Co., The (pressure and vacuum)

Cable Co., The (pressure and vacuum)
Bridgeport
J. & S. Machine Co., Inc. (End Measures,
Cyl Plugs & Rings)
Hartford
Manning Maxwell & Moore, Inc. Stratford
New Haven Trap Rock Co., The Machine
Products Div (Johan Universal and Special
Purpose Gauge)
Pratt & Whitney Co., Inc. (Precision Measurement all types)
West Hartford

Gears
Bridgeport Worm & Gear Mfg. Co.
Bridgeport
Bristol Instrument Gears, Inc.
Mitrametric Co., The (blanked fine pitch)
Torrington

Gears and Gear Cutting
Farrel-Birmingham Company, Inc. Ansonia
Fenn Mfg. Co., The
United Gear & Machine Co. Suffield

Generators
Inc. (electric, portable, gasoline
New Haven Electrical Equipment Corp. New Haven driven)

Glass Blowing Macalaster Bicknell Company New Haven

Glass Containers Feldman Glass Co., The New Haven

Glass Cutters Fletcher-Terry Co., The Forestville

Farrel-Birmingham Company, Inc. (Roll and Cylindrical) Ansonia Horberg Grinding Industries, Inc. (Precision custom grinding; centerless, cylindrical, surfaces, internal and special) Bridgeport K-F & D Mfg. Company, The (Contour and Precision)

Manchester

Grinding Machines ngham Company, Inc Farrel-Birmingham (Roll)

Grinding Wheels Fuller Merriam Company, The West Haven

American Brass Company, The Dorset-Rex, Inc., Subsidiary of Landers, Frary & Clark

Superior Steel Products Corp.

Guards Interstate Industrial (watchmen service) Protection Bridgeport

Gyroscopes Kenyon Laboratories, Inc. Deep River

Hack and Band Saw Blades Capewell Manufacturing Co. Hartford

Hair Hygiene Preparations
Parker Herbex Corporation Stamford

Hammer and Axe Wedges Saling Manufacturing Company ("Sta-Fast Unionville

Hammers—Carpenters and Machinists Capewell Manufacturing Company Harti

Hand Tools

Billings and Spencer Company (wrenches, sockets and shop tools)

Bridgeport Hardware Mfg. Corp., The (screw drivers, wrenches, nail pullers, box & crate openers, pliers, saws, trowls & special forgings)

Hand Tools

(wrenches, and place of the place of

Hardened and Ground Parts
Hartford Machine Screw Company
Div of Standard Screw Co. Hartford

Hardness Testers
Wilson Mechanical Instrument Div American
Chain & Cable Company, Inc. Bridgeport

Hardware Bassick Company, The (Automotive) Bridgeport Terryville Derby New Haven New Haven Eagle Lock & Screw Co.
Gordon Associates
Harlock Products Corp.
Sargent & Company
Wilcox Crittenden & Co., Inc.
and industrial)
Yale & Towne Mfg. Co., The
Hridgeport
Terryville
Terryville
New Haren
New Haven
Middletown
Stamford

Hardware—Marine & Bus Rostand Mfg. Co., The Milford

Hardware—Trailer Cabinet Excelsior Hardware Co., The

Hardware, Trunk & Luggage
Corbin Cabinet Lock Div. American Hardware Corp.
Yale & Towne Mfg. Co., The
Stamford

Scovil, Inc., D. & H. Higganum

Hat Corporation of America (men's felt)
South Norwalk

Hat Machinery Doran Bros., Inc. Danbury

Health Surgical & Orthopedic Supports Berger Brothers Company, The (cust made for back, breast and abdoment (custom

Silent Glow Oil Burner Corp., The (portable

Heat Elements
Electroflex Heat, Inc.
Safeway Heat Elements, Inc. (woven Hartford

Middletown resistance type) Heat Exchangers

Whitlock Manufacturing Co. Hartford

Hent Sealing—Electronic Berger Bros. (vinyl-polyethylene) New Haven

Heat Treating
ABA Tool & Die Co.
Bennett Metal Treating Co., The Elmwood
Commercial Metal Treating Co. Bridgeport
Hartford Machine Screw Company
Hartford

New Haven Heat Treating Co., Inc., New Haven
Progressive Metal Treating (tool and production)
Skene Co., Inc., The William A. (metals)
Bridgeport

Skinner Precision Industries, Inc., Skinner-Horton Chuck Div. New Britain Stanley P. Rockwell Co., Inc., The Hartford (Advt.)

Heat Treating Salts and Compounds
Barnes Co., The, Wallace Div. Associated
Spring Corp.
Bauer & Company, Inc.
Rolock, Inc. (Retorts, Muffles,
Stanley P. Rockwell Co., Inc.,
Bartford
The (commercial)

Heat Treating Fixtures
Rolock, Inc. (Trays, Baskets, etc.)
Fairfield
Wiretex Mfg. Co., Inc. Bridgeport

Heat Treating Salts and Compounds Mitchell-Bradford Chemical Co. Milford

General Electric Company Bridgeport

G & O Manufacturing Co. New Haven

Hartford Element Co. Hartford

Heavy Chemicals
Naugatuck Chemical Division, United
States Rubber Co. (sulphuric, nitric, and
muriatic acids and aniline oil)
Naugatuck

Hex-Socket Screws
Allen Manufacturing Company, The
Bloomfield
Bristol Company, The
Hartford Machine Screw Co.
Standard Screw Co.
Hartford

High Frequency Alternators
Stamford
Stafety Electrical Equipment Corp.
New Haven

Highway Guard Bail Hardware
Malleable Iron Fittings Co. Branford

Hinges Homer D. Bronson Company Beacon Falls

Hobs and Hobbings
Pratt & Whitney Co., Inc. (Die and Thread milling)
West Hartford

Hobs Hanson-Whitney Co., The (fine pitch gear)

Scovill, Inc., D. & H. (eye and grub) Higganum

Union Mfg. Company New Britain

Hooks & Eyes
Oakville Co. Div., Scovill Mfg. Co. Oakville

Homogenizers
Sonic Engineering Corp. Stamford

K-F & D Mfg. Company, The Manchester

Hose Fittings
Scovill Manufacturing Company (garden and industrial hose) Waterbury

American Brass Co., American Metallic
Hose Branch
Johnson Metal Hose, Inc.
Waterbury

Hose Supporter Trimmings
Hawie Mfg. Co., The (So-Lo Grip Tabs)
Bridgeport

Seamless Rubber Company New Haven

Hospital & Rehabilitation Equipment Polecats, Inc. Old Saybrook Hydraulic Brake Fluids Eis Automotive Co. Middletown

Hydraulic Components and Systems Vickers Incorporated Marine & Ordnance Dept. Waterbury

H.S. Form Tools Somma Tool Co. (for automatic screw machines)

**Hypodermic Needles** Roehr Products Company Waterbury

Ignitors
Peabody Engineering Corporation (gas, electric or oil, electric) Stamford

Impregnating American Metaseal, Inc. (metal, wood, etc.) Hamden

Incinerators
Silent Glow Oil Burner Corp., The
Hartford

Hartford Special Machinery Co., (Hartford "Super-Spacers") (Hartford

Induction Hardening
Flame Treating & Engineering Co.
West Hartford

Induction Heaters
Radio Frequency Co., Inc. New Britain

Industrial Chrome Plating
Mirror Polishing & Plating Co., Inc.
Waterbury

Aluminized Finish & Mrg. Co. (vacuum)
Cromwell
Illuminized Finish Co. (vacuum) Cromwell

Industrial Design
Van Dyck Associates (product appearance and engineering)
Westport

Industrial Displays
Sansone Co., S. Frederick (Designers,
Builders and Counselors) Short Beach

Industrial Finishes Chemical Coatings Corporation Rocky Hill

Industrial Security
Interstate Industrial Protection Co.
Bridgeport

Seamless Rubber Company New Haven

Industrial Testing Services
Sperry Products Co., Div. of Howe Sound Co.
Ultrasonic, X-ray and magnetic particle)
Danbury

Infrared Detectors
Barnes Engineering Co. (and systems)
Stamford

Waterman Pen Company, Inc. Seymour

Insecticides
American Cyanamid Company Waterbury
Fuller Brush Co., The East Hartford

Heli-Coil Corp Threads Danbury

Instalment Payment Books
Wassell Organization, Inc. Westport

Insulated Wire & Cable
General Electric Company (for residential
commercial and industrial applications)
Bridgeport
Kerite Company, The Seymour

Insulated Wire & Cable Machinery
Davis Electric Company Wallingford

Instruments

Manning Maxwell & Moore Inc. Stratford Melcam Standards Laboratory (certified calibrations and repair specializing in quality control)

Penn Keystone Corporation
Pratt & Whitney Co., Inc. (Precision Measuring)

Sperry Products Co., Div. of Howe Sound Co. Ultrasonic flaw detection and thickness measurement)

Terryville Manufacturing Co. (stampings for)

Action Systems Co. Meriden

Action System.

Interval Timers
Lux Clock Manufacturing Company
Waterbury
Rhodes, Inc., M. H. Hartford

Inverters Kenyon Laboratories, Inc. (Solid State) Deep River

Case Brothers, Inc.

Manchester

Jig Borer
Atlantic Machine Tool Works, Inc. (Atlantic in several sizes) Newington Linley Brothers Company Bridgeport Moore Special Tool Co. (Moore) Bridgeport Pratt & Whitney Co., Inc. West Hartford

Jigs, Fixtures & Gages
Federal Machine & Tool Co. Bristol

Jig Grinder Moore Special Tool Co. (Moore) Bridgeport

Junior Automobiles
Power Car Company Mystic

Key Blanks
Sargent & Company
New Haven

Naugatuck Chemical Division, United States Rubber Co. (for rubber articles) Naugatuck Seri-Print, Inc. (silk screened on glass, plastic, metal) Waterbury

Label Dispensers
Derby Sealers, Inc. (pressure-sensitive labels)
Derby

Laboratory Equipment
Eastern Industries, Inc. New Haven

Laboratory Supplies

Macalaster Bicknell Company New Haven

American Fabrics Company, The Bridgeport Wilcox Lee Corporation, The Middletown

Lacquers & Synthetic Enamels
Chemical Coatings Corporation Rocky Hill
1-Sis Chemicals, Inc. Stamford

Flint Co., A. W. Ladders
New Haven

de Sherbinin Products, Inc.
Lampholders—Incandescent & Fluorescent
General Electric Company

Lamp Products
Hawleyville
Fluorescent
Bridgeport

Lamp Shades
Verplex Company, The Essex

Lathe Chucks
Skinner Precision Industries, Inc.,
Skinner-Horton Chuck Div. New Britain
Whiton Machine Co. New London

Lathes—Toolroom and Automatic Pratt &Whitney Co., Inc. West Hartford

Christie Plating Co., The Groton

Herman Roser & Sons, Inc. (Genuine Pigskin) Glastonbury

Leather Dog Furnishings Andrew B. Hendryx Co., The New Haven The Smith-Worthington Saddlery Co. Hartford

Leather, Mechanical Auburn Manufacturing Company. The (packings, cubs, washers, etc.) Middletown

Letterheads
Lehman Brothers, Inc. (designers, engravers, lithographers)
New Haven

Lighting Equipment
Miller Co., The (Miller, Ivanhoe) Meriden

New England Lime Company Canaan

Lipstick Cases
Scovill Manufacturing Company Waterbury

Bridgeport Metal Goods Mfg. Co.

Bridgeport Metal Goods Mig. Co.
Bridgeport
Orset-Rex, Inc., Subsidiary of Landers,
Frary & Clark
Lakewood Metal Products, Inc. Waterbury
Seri-Print, Inc. (silk screen decorated)
Waterbury

Lithography

city Printing Co., The Connecticut Printers, Inc. Lehman Brothers, Inc. Muirson Label Co., Inc. O'Toole & Sons, Inc., T. Steinbach & Sons, A. D. New Haven Hartford New Haven Meriden Stamford New Haven

Locks-Builders

Sargent & Company New Haven

Locks-Cabinet

Excelsior Hardware Co., The Stamford

Lock Nuts McMellon Bros., Inc.

Bridgeport Locks—Suitcase and Trimmings Isior Hardware Co., The Star Stamford

Excelsior Hardware Co., T Stamford

Locks—Zipp Excelsior Hardware Co., Zipper Stamford

Wiremold Company, -Non-Metallic Hartford

Lumber & Millwork Products
City Lumber Co. of Bridgeport, Inc.
Bridgeport

Collins Company, The Collinsville

Machine Designers and Manufacturers Research & Development Designers, Inc. Middletown

Machine Shop Fabrication Advanced Electronics, Inc. Ro Rocky Hill

Machine Tools
Farrel-Birmingham Company, Inc. Ansonia
Pratt & Whitney Co., Inc. West Hartford
Producto Machine Company, The
Bridgeport Bridgeport

Machine Work
Banthin Engineering Co.
Essex Machine Works, Inc.
Farrel-Birmingham Company, Inc. Ansonia
Fenn Manufacturing Company, The (preNewington
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Contrac Fenn Manufacturing Newington cision parts)
Fuller Brush Co., The (precision contract work)
Hartford Special Machinery Co., The (conHartford Special Machinery Co., The year threaded tract work only)
McMellon Bros., Inc. (precision threaded McMellon Bros., Inc. (precision threader parts)
National Sheradizing & Machine Co. (job)
Hartford National Successful Rock Co., The, Machine Products Div. North Branford Products Corporation Hartford Products Div.

North Branford
Parker-Hartford Corporation
Safety Electrical Equipment Corp.

New Haven
Torrington Manufacturing Co., The (special rolling mill machinery)
Torrington Co., The
Torrington

Machinery
Conn. Machine Repair, Inc. (special mfg.)
Bridgeport
Davis Electric Company (Wire and Cable)
Wallingford
Fenn Manufacturing Company, The
(special)

Company The (mill) (special)

Hallden Machine Company, The (mill)

Torrington Manufacturing Co., The (mill)

Torrington Manufacturing Co., The Machine Co., Waterbury Farrel Foundry & Machine Co., The Division of Textron, Inc. (metal

Banthin Engineering Company (new and Bridgeport

Machinery—Automatic Feeding Technical Design and Development Co... Milford

Machinery—Bolt and Nut Waterbury Farrel Foundry & Machine Co., The, Division of Textron, Inc. Waterbury

Machinery—Cold Heading Waterbury Farrel Foundry & Machine Co., The, Division of Textron, Inc. Waterbury

Machinery Dealers & Rebuilders
Botwinik Brothers New Haven
Bristol Metal Working Equipment
East Hartford
Conn. Machine Repair, Inc. Bridgeport
J. L. Lucas and Son Fairfield
State Machinery Co., Inc. New Haven

Machinery—Extruding Standard Machinery and Davis-Standard Divisions of Franklin Research Corp., Mystic

Machinery—Metal-Working
Fenn Mfg. Co., The
Waterbury Farrel Foundry & Machine Co.,
The, Division of Textron, Inc. Waterbury
Pratt & Whitney Co., Inc. West Hartford

Machinery-Nut Waterbury Farrel Foundry & Machine Co. The, Division of Textron, Inc. (forming and tapping) Waterbury

Machinery—Screw and Rivet Waterbury Farrel Foundry & Machine Co., The, Division of Textron, Inc. Waterbury

Machinery—Wire Drawing
Fenn Mfg. Co., The
Newington
Waterbury Farrel Foundry & Machine Co.,
The, Division of Textron, Inc. Waterbury

Machinery Rebuilding
Line Benair Inc. Bridgeport Conn. Machine Repair, Inc.

Machinery—Wire Straightening
Shuster Wire Machine Div., Mettler Machine Tool, Inc. New Haven
Waterbury Farrel Foundry & Machine Co.,
The, Division of Textron, Inc. Waterbury

Machinery—Wire Straightening & Cutting Shuster Wire Machine Div., Mettler Ma-chine Tool, Inc.

Machines
Allison-Campbell Div., American Chain & Cable Co., Inc. (abrasive cutting machines and wheels)
Bridgeport
Coulter & McKenzie Machine Co., The (special, new development engineering design and construction)
Bridgeport

Machines—Automatic Chucking Pratt & Whitney Co., Inc. (Potter & Lahnson) West Hartford

Machines—Draw Benches
Fenn Manufacturing Company, The
Newington Waterbury Farrel Foundry & Machine Co., The, Division of Textron, Inc. Waterbury

Machines—Forming
Nilson Machine Company, The A. H.
slide wire and ribbon stock) Shelton

Machines—Paper Ruling John McAdams & Sons, Inc. Norwalk

Machines-Rolling
Fenn Manufacturing Company, The
Newington

Machines—Slotting
Waterbury Farrel Foundry & Machine Co.,
The, Division of Textron, Inc. (screw head)
Waterbury

Machines—Special Fenn Mfg. Co., The Fuller Brush Co., The Eas Newington

Machines—Special Build achine Works, Inc. Essex Machine Essex

Machines—Swaging
Fenn Mfg. Co., The, Newington
Torrington Co., The
Waterbury Farrel Foundry & Machine Co.,
The, Division of Textron, Inc. Waterbury

Muchines—Thread Rolling Shuster Wire Machine Div., Mettler Ma-chine Tool, Inc. Waterbury Farrel Foundry & Machine Co., The, Division of Textron, Inc. Waterbury

Machines—Turks Head Fenn Mfg. Co., The Waterbury Farrel Foundry & Machine Co., The, Division of Textron, Inc. Waterbury

Machines—Wire Drawing
Fenn Mfg. Co., The
Waterbury Farrel Foundry & Machine Co.,
The, Division of Textron, Inc. Waterbury

Machining—Horizontal Boring
Tucker Machine Co. New Haven

Magnesium Sand Castings
Peerless Aluminum Foundry Co., Inc Bridgeport

Management Consultants Administrative-Technical Personnel Service Hartford

Management Counsel Wirth Management Company Wilton

Manganese Bronze Ingot Whipple and Choate Company Bridgeport

W. E. Bassett Company, The

Manifold Forms

Walters Business Forms, Inc. Bloomfield

Marine Equipment
Wilcox-Crittenden Div., North
Mfg. Co. & Judd Middletown

Marine Machines
Machine Works, Inc. (Propellors, Shafts, etc.) Essex

Marine Reserve Gears Snow-Nabstedt Gear Corp., The New Haven

Marketing Counsel Brunelle Co., The Charles

Market Studies and Reports Wirth Management Company Wilton

Marketing Service
Business Incubation Laboratory Wilton

Marking Devices Cooney Engraving Co. Hoggson & Pettis Mfg. Co., The New Haven Parker-Hartford Corporation (steel) Hartford

Marking Tools Parker-Hartford Corporation Hartford

Masonry Products
Plasticrete Corp Hamden, Hartford,
North Haven, Waterbury, Willimantic

Materials Handling ., Inc., W. A. (tote pans) Parsons Co., Inc., Durham

Mattresses Waterbury Mattress Co. Waterbury

Metal Boxes
Durham Mfg. Co.
Parsons Co., Inc., W. A. (tool kits)
Durham

Metal Boxes and Displays

Durham Mfg. Co., The (Designing & Mfg. to customers' specifications) Durham Merriam Mfg. Co. (Bond Security, Cash, Utility, Personal Files, Drawer Safes, Custombilt containers and displays)

Durham

Metal Cleaners

Apothecaries Hall Company Division,
The Hubbard Hall Chemical Company
Waterbury New Have Waterbury Enthone, Inc. MacDermid, Incorporated

Metal Finishes New Haven o. Milford Mitchell-Bradford Chemical Co.

Metal Finishing
Contract Plating Co., Inc.
Hartford Industrial Finishing Co. Hartford
National Sheradizing & Machine Co.
Hartford Stamford Polishing & Plating Corp. Waterbury Plating Company Waterbury

Metal Formings Master Engineering Company
West Cheshire
Oakville Co. Div. Scovill Mfg. Co. Oakville
Stanley Pressed Metal New Britain

Metallurgists
Bridgeport Testing Laboratory, Inc.
Bridgeport

Leed Co., The H. A.

Metal Powder Products
Norwalk Powdered Metals, Inc. Norwalk

Metal Products—Stampings American Brass Company. The Waterbury Scovill Manufacturing Company (Made-to-Vaderbury Order) anley Pressed Metal New Britain

Metal Specialties Excelsior Hardware Co., The Torrington Co., The Stamford Torrington

Metal Spinning Moseley Metal Crafts, Inc. West Hartford

Metal Stampings
American Brass Company, The Waterbury Eletter Formed Metals, Inc.
Cly-Del Manufacturing Co.
Dorset-Rex, Inc., Subsidiary Frary & Clark
Excelsior Hardware Co., The H. C. Cook Co., The Stamford Humason, Inc.
Mohawk Mfg. Co. (threaded) Middletown North & Judd Mfg. Co.
J. A. Otterbein Company, The Materbury Look & Specialty
Waterbury Companies, Inc.
Waterbury Look & Specialty

Metals Testing

Metals Testing

Metals Testing

Metals Testing

Waterbury Waterbury

Metals Testing

Metals Testing
Metals Testing Co., Inc. (Air Force, Army,
Navy, Certified, Magnaflux, Zyglo)
East Hartford

Sprague Meter Company Bridgeport

Rhodes, Inc., M. H. Hartford

Microfilming
American Microfilming Service Co. New Haven Milford Cine-Video Productions, Inc.

Microfilm—Reader-Printer
Thermo-Fax Sales of Conn., Inc.
New Haven

Slocum Co., The J. T. Glastonbury

Mill Machinery
Torrington Mfg. Co., The Torrington Waterbury Farrel Foundry & Machine Co,
The, Division of Textron, Inc. Waterbury

Milling Machines
Pratt & Whitney Co., Inc. (Keller Tracer
—controlled Milling Machines)
West Hartford

Scovill Manufacturing Co. (aluminum, brass, bronze, nickel silver—sheet, rod wire, tube) Waterbury

Mill Supplies
Wilcox-Crittenden Div., North & Judd
Mfg. Co. Middletown

Millwork Hartford Builders Finish Co. Hartford

Gorn Electric Co. Sta Stamford

Minute Minders
Lux Clock Mfg. Co., The Waterbury

Mirror Rosettes and Hangers Waterbury Companies, Inc. Waterbury

Missile Details
Tag Alloy Welding & Mfg. Co., Inc. (weldGlastonbury

Mixing Equipment
Alsop Engineering Co.
Eastern Industries, Inc. Milldale B. & N. Tool & Engineering Co. (instruments and timing devices) Thomaston

Models and Prototypes
Research & Development Designers, Inc.
Middletown

Mold Frames
Superior Steel Products Corp. Cheshire

Molded Fiberglass Products
Fiberglass Products Eng. Co.,
South Norwalk

Moldings—Powder Metal Materials American Sinterings Div., Engineered Plastics Watertown

Fuller Brush Co., The (wet and dry mops and dusters) East Hartford

Motion Picture Equipment Victor Animatograph Corp., a div. of Ka-lart (16 mm. sound and silent projectors, film splicers, and rewinders) Plainville

Cine-Video Productions, Inc. Milford

Motor Drives Electronic Controls, Inc. adjustable speed) Stamford

Motor—Generator Sets
Electric Specialty Co. Stamford
Safety Electrical Equipment Corp.
New Haven

Cramer Controls Corp., The Cen Centerbrook

Motors Synchronous
Cramer Controls Corp., The Centerbrook
Electric Specialty Co. Stamford

Moulded Plastic Products
Butterfield, Inc., T. F. Ns
U. S. Plastic Molding Corp. Wal
Waterbury Companies, Inc. Watertown Mfg. Co., The Naugatuck Wallingford Waterbury Watertown

Mouldings \*4 Co., The (architectural, Hamden Himmel Brothers Co., T metal and store front)

Moulds Hoggston & Pettis Mfg. Co., The (steel) New Haven

Name Plates

Cooney Engraving Co. Branford
Quality Name Plate Inc. East Glastonbury
Seton Name Plate Co. (metal & plastic
name plates and identification tags)
New Haven

Napper Clothing
Standard Card Clothing Co., The (for textile mills)
Stafford Springs

Wilcox Lace Corp., The Middletown

New Product Consultants
Business Incubation Laboratory Wilton

Nickel Anodes
Apothecaries Hall Co, Div., The Hubbard
Hall Chemical Co. Waterbury
Seymour Mfg. Co., The Seymour

Nickel Silver

American Brass Company, The Waterbury
Plume & Atwood Mfg. Co., The Thomaston
Waterbury Rolling Mills, Inc. (sheets,
strips, rolls)

Waterbury

Nickel Silver Ingot Whipple and Choate Co., The Bridgeport

Night Latches
New Haven Sargent & Company

Hartford Machine Screw Co. Hartford

Non-ferrous Metal Castings Miller Company, The Meriden

Nuclear Details
Tag Alloy Welding & Mfg. Co. Inc. (weldments)

Nuts, Bolts and Washers
Clark Brothers Bolt Co. Milldale
Hartford Machine Screw Co. Div. of
Standard Screw Co. Therington
Torrington Co., The

Office Equipment

Pitney-Bowes, Inc. Stamford Thermo-Fax Sales of Conn., Inc. New Haven Underwood Corporation Hartford Wassell Organization, Inc.

Office Printing

Kellog & Bulkeley, A Div. of Connecticut Printers, Inc. Hartford

Offset Printing
City Printing Co., The New Haven

Oil Burners

Miller Company, The (domestic) Meriden
Peabody Engineering Corp. (Mechanical or
Steam Atomizer) Stamford
Silent Glow Oil Burner Corp., The Hartford

Oil Tanks Norwalk Tank Co. Div. Mersick Industries, South Norwalk Hartford Inc. Whitlock Mfg. Co., The

Anderson Oil and Chemical Co., Inc., Portland

Optical Comparator Charts Research & Development Designers, Inc. Middletown

Optical Instruments
Barnes Engineering Co. (and systems) Stamford

Otis Woven Awning Stripes
The Falls Company Norwich

Rockwell Co., W. S. (industrial) Fairfield

Ovens—Electric Bauer & Company, Inc. Hartford

Commerce Packaging Corporation (military, commercial & export canning & stamford Seri-Print, Inc. (silk screened plastic, metal, glass)

On Waterbury

Packaging—Engineering
Commerce Packaging Corp. Stamford
Progressive Packaging Corp. (military &
commercial for domestic and export
packaging, canning, crating and ship-Packaging-Engineering

Packaging & Packing Commerce Packaging Corp. Mercer & Stewart Co., The Stamford Hartford

Mercer & Scenarion

Packing

Auburn Manufacturing Co., The (leather, rubber, asbestes, fibre) Middletown Raybestos Div. of Raybestos-Manhattan, Inc. (Asbestos and Rubber Sheet)

Bridgeport

Padlocks Sargent & Company New Waterbury Lock & Specialty Co., New Haven The Milford

Pads-Office The Baker Goodyear Company Branford

Tredennick Paint Mfg. Co., The Meriden

Leed Co., The H. A.

Moore Special Tool Co (crush wheel dresser)

Paperboard

Paperboard
Continental Can Co., Boxboard and Folding Carton Division
Federal Paper Board Co., Inc.
New Haven
New Haven Board & Carton Co., The
New Haven
Paperboard
Montville Robertson Paper Box Co. Montville

Paper Boxes Atlantic Carton Corp (folding) Norwich National Folding Box Co. Div. Federal Paper Board Co., Inc. (folding) New Haven & Versailles

Mills, Inc. H. J.

New Haven & versance
Bristol
New Haven Board & Carton Co., The
New Haven Robertson Paper Box Co. (folding)
Montville

Paper Boxes—Folding and Setup Bridgeport Paper Box Co. Bridgeport M. Backers' Sons, Inc. Wallingford

H. C. Cook Co., The (steel) Ansonia

Paper Fasteners
Oakville Co. Div. Scovill Mfg. Co. Oakville

Paper Mill Machinery Farrel-Birmingham Company, Inc. Ansonia

Paper Products
Nu-Wipe, Inc. (toweling, dusting, polishing, finishing, packaging)
Plainville

Paper—Shredded
Nielsen & Sons, Inc., John R.
South Windsor

Paper Tubes and Cores
Sonoco Products Co. (Climax-Lowell) Div.
Mystic

Parallel Tubes

Sonoco Products Co. (Climax-Lowell) Div.

Rhodes, Inc., M. H. Hartford

Parts

Hartford Machine Screw Co., Div. of Standard Screw Co. Hartford Scovill Manufacturing Company (ammunition, electric instrument, electrical appliance, fountain pen, instrument, lighting fixture, ordnance, etc.—blanked, stamped, formed, drawn, re-drawn, forged, screw machined, headed, pointed, drawn forged, screw machined, headed, pointed, waterbury Torrington Co., The Torrington

Parts and Assemblies
Custom Products Corp Bridgeport

Penlights
Bridgeport Metal Goods Mfg. Co.
Bridgeport

Perfumes Chesebrough-Pond's, Inc. Clinton

Personnel Consultants Advancement Opportunities Snelling & Snelling Wirth Management Company Hartford Hartford

Personnel Recruiting Administrative-Technical Personnel Service (executive) Advancement Opportunities

Andrew B. Hendrix Co., The New Haven

Phosphate Coating
New Britain Black Oxide, Inc.

Phosphor Bronze

American Brass Company, The Waterbury
Miller Company, The (sheets, strips, rolls)

Meriden Plume & Atwood Mfg. Co., The Thomaston Waterbury Rolling Mills, Inc. (sheets, strips, rolls) Waterbury

Whipple and Choate Co., The Bridgeport

Whippie and Photo Engraving
Dowd, Wyllie & Olson, Inc.
Wilcox Photo Engraving Co., Inc.,
New Haven

Photocopy Equipment and Supplies
Ludwig, Inc., F. G. Old Saybrook
Photographic Equipment
Kalart Company, Inc. Plainville

Photographic Murals Eitel, Walter T. (color & black and white) West Hartford

Photography
Eitel, Walter T. West Hartford Eitel, Walter T.

Piano Repairs

Pratt Read & Co., Inc. (keys and action)

Ivoryton

Pratt Read & Co. (keys and actions, backs, plates)

Ivoryton

Pillow Blocks
New Departure Div. of General Motors
(ball) Bristol

CEM Company ("Spirol")

Hartford Machine Screw Co.

Standard Screw Co.
Oakville Co. Div. Scovill Mfg.
& straight)

Star Pin Co., The (straight and safety)

Shelton Torrington Co., The (Dowel & Taper)
Torrington

Dorset-Rex, Inc., Subsidiary of Landers, Frary & Clark Union Pin Co., The Thomaston Winsted

Union Pin Co., The Winsted

Pipe
American Brass Co., The (brass & copper)
Waterbury
Chase Brass & Copper Co. (red brass and
Waterbury copper)
Howard Co. (cement well and chimney)
New Haven

Malleable Iron Fittings Co. Branford

Austin Organs, Inc. Hartford

Pipe Plugs
Hartford Machine Screw Co. Div. of
Standard Screw Co. Hartford

Pipe Plugs—Socketed
Hartford Machine Screw Co. Div. of
Standard Screw Co. Hartford

Pistols & Revolvers
Colt's Patent Fire Arms Mfg. Co., Inc.
Hartford

Plant Protection
Interstate Industrial Protection Co.
Bridgeport

Plastic Blister Packaging
Commerce Packaging Corporation (ball
bearings & small parts) Stamford

Plax Corporation Bloomfield Seri-Print, Inc. (silk screen labeling) Waterbury

Plastic Buttons
Frank Parizek Manufacturing Co., The
West Willington

Plastic Coatings
East Hartford Plastonics, Inc. East Hartford
Piastic Engraving
New England Engraving Co. Div.
Plastics of New York, Inc.
Salisbury Products, Inc.
Salisbury Products, Inc.

Plastic Extruders
Danielson Mfg. Co. The (nylon and other engineering plastics)
Jessall Plastics Div. of The Storage Battery Co.

Kensington

Plastic Fabrication
Dura Plastics of New York, Inc. Westport
Fabricon Corp. Unionville
New England Rack Co., Inc. (hood & duct
systems, tanka, etc.) Handen
Sallsbury Products, Inc. Lakeville

Plastic Film & Sheet Materials
Gliman Brothers Co., The
Plax Corporation
Shore Line Industries, Inc.
Clinton

Plastic Forming
Dura Plastics of New York, Inc. Westport

Plastic Lining Equipment New Haven Enthone, Inc.

Plastic Material
Dura Plastics of New York, Inc. (sheet, rod & tube) Westport

Plastic Molders

B & B Plastics, Inc.
Butterfield, Inc. T. F.
Cogglins Mfg. Co., The J. B. Meriden
Conn. Plastics
Danielson Mfg. Co., The (nylon and other engineering plastics)
Engineered Plastics, Inc.
Plastic Molding Corporation

Oakville
Waugutuck
Waterbury
Danielson
Watertown
Sandy Hook

Rogers Mfg. Co., The Specialty Plastics Corp (custom) Stanley Chemical Co., The Ed U. S. Plastic Molding Corp. W Waterbury Companies, Inc. W Waterbury Mfg. Co., The W m) Shelton East Berlin Wallingford Waterbury Watertown

Robertson Paper Box Co., Inc. (plastic Montville

Plastic Pipe and Fittings
Danielson Mfg. Co., The (nylon and other engineering plastics)
Enthone, Inc.
New Haven

Plastic Rod
Danielson Mfg. Co. The (nylon and other engineering plastics)
Danielson

Plastic Strip
Danielson Mfg. Co. The (nylon and other engineering plastics)

Danielson

Plastic Tubing
Danielson Mfg. Co. The (nylon and other engineering plastics)

Danielson

Plastic Wire Coating Materials Electronic Rubber Co. Sta Stamford

Plastics
Naugatuck Chemical Division, United
Naugatuck Rubber Co. Naugatuck
(Advt.)

Plastics & Resins

American Cyanamid Co., Plastics & Resins Div. Wallingford

Plastics—Moulds & Dies Crown Tool & Die Co., Inc. Bridgeport

Plasticrete Block
Plasticrete Corp. Hamden, Hartford,
North Haven, Waterbury, Willimantic

Acme Chromium Plating Co. Christie Plating Co. Groton Chromium Process Company, The (Chromium Plating only) Shelton Water Plating Company Waterbury

Platers' Equipment Apothecaries Hall Company Waterbury Enthone, Inc., Lea Manufacturing Co., MacDermid Incorporated New Haven Waterbury The

Christic Plating Co., The (including lead plating Co., The the distribution of the plating of the plating Inc.
Groton Giering Metal Finishing, Inc.
Hamden Naugatuck Superior Plating Co.
Tec-Plate, Inc.
Windsor Locks

Plating Processes and Supplies
Enthone, Inc. New Haven
Seymour Manufacturing Co., The Seymour

Plating Racks
New England Rack Co., Inc. (anodizing, conveyor, etc.)
Hamden

Plumbers' Brass Goods
McGuire Mfg. Co. Waterbury
Scovill Manufacturing Co. Waterbury

Pneumatic Conveyors Spencer Turbine Co., The Hartford

Malleable Iron Fittings Co. Branford

Police Equipment
The Smith-Worthington Saddlery Co.
Hartford

Polishing
C. & E. Metal Finishing Co. Hartford
Mirror Polishing & Plating Co., Inc.
Waterbury

Postage Meters

Pitney Bowes, Inc. Stamford

Potentiometers—Electronic
Bristol Company, The Waterbury

Power Wrenches Cushman Chuck Co. (chucks) Hartford

Precision Machining National Tool & Die Co. Hartford

Precision Machine Tool Spindles Whiton Manufacturing Co. (for milling, grinding, boring & drilling) Farmington

American Standard Products, Inc. Hartford Hartford Machine Screw Co., Div. of Standard Screw Co., Hartford Torrington Co., The Torrington

Precision Revolving Machinery Whiton Manufacturing Co. Farm Farmington

Precision Sheet Metal Fabrication Milford Fabricating Co. Mil Milford

Precision Springs & Wire Forms Rowley Spring Co., Inc., The Bristol

Waterbury Companies, Inc. Waterbury

Preservatives—Wood, Rope, Fabric
Darworth Incorporated ("Cuprinol")
("Cellu-san") Pressboard
Case Brothers, Inc. (genuine) Manchester
Case & Risley Press Paper Co. (genuine)

Presses
Farrel-Birmingham Co., Inc. (Hydraulic)
Ansonia

Presses—Power

Pneumatic Application Co., The (modernization of presses through conversion to Wichita Air Clutch operation) Simsbury Waterbury Farrel Foundry & Machine Co., The, Div. of Textron, Inc. Waterbury

Waterbury The, Div. of Textron,

Pressure Vessels
Bigelow Co., The
Norwalk Tank Co. Div. Mersick Industries,
South Norwalk
Inc.
Fairfield
Hartford

Allied Printing Service,
Bussmann Press, Inc.
City Printing Co., The
Connecticut Printers, Inc.
Finlay Brothers
Heminway Corporation,
Heminway Corporation,
Press
Inc.

New Haven
Hartford
Waterbury
Bristol
Hartford
New Haven
Meriden
Ger all Heminway Corporation, The Hildreth Press Hildreth Press Hunter Press Hunter Press Honor Hartford Hartf

Printing Machinery
Banthin Engineering Co (automatic) Bridgeport

ds, Inc., Div. CSW Plastic Types, Inc. (mats services) Rocky Hill

Printing Rollers
Chambers-Storck Company, Inc., The
Norwich

Ad-Craft Displays, Inc. Bloomfield

ouse Co., N. E. (Assembly, Stampings, Drilling & Tapping) East Hampton

Production Control Equipment
Ripley Company, Inc. Middletown
Wassell Organization, Inc. Westport

Propellers—Aircraft
Hamilton Standard Div. United Aircraft
Corp. (propellers and other aircraft equipment)
Windsor Locks

Protective Coatings
Harrison Company, The A. S. (waxes)
South Norwalk

Public Relations Counsel Brunelle Co., The Charles

Publicity Services Brunelle Co., The Charles Watson-Manning Advertising

O'Toole & Sons, Inc., The Stamford

Aslop Engineering Co. Milidale
Sonic Engineering Co. Stamford
Sump Pumps, Inc. (Deep-well electro-subniersible)

Pumps—Small Industrial Eastern Industries, Inc. New Haven

Hoggson & Pettis Mfg. Co., The (ticket & cloth)

Purchasing Service—Industrial Hartz-Miller Associates Meriden

Putty Softeners—Electrical
Fletcher Terry Co., The Forestville

Pyrometers
Bristol Co., The (recording and controlling)
Waterbury

Automatic Signal Div. Eastern Industries,

Bush Manufacturing Co. West Hartford G & O Manufacturing Company, The New Haven Vulcan Radiator Co., The (steel and

Ray Proof Corporation Products
Stamford

Radiators—Engine Cooling
G & O Manufacturing Co. New Haven

Ratchet Offset Screw Driver Chapman Co., J. W. Durham

Rayon Staple Fiber
Hartford Fibres Co. div Bigelow Sanford Co.
Rocky Hill

Atrax Company, The (solid carbide) Newington Pratt & Whitney Co., Inc. (all types)
West Hartford Pratt & Whitney Co., Inc. (all types carbide and HSS)

West Hartford
West Hartford

Reamers—Helical Gammons-Hoaglund Co., The Manchester

Reamers—Machine Gammons-Hoaglund Co., The Manchester

Reamers—Taper Gammons-Hoaglund Co., The Manchester

Record Equipment
Wassell Organization, Inc., (filing equipment)
Westport

Recorders

Bristol Co., The (automatic controllers, temperature, pressure, flow, humidity)

Waterbury

Dictaphone Corporation Bridgeport

Reduction Gears Snow-Nabstedt Gear Corp., The New Haven

Bridge Mfg. Co., The (for wire and cable)
Hazardville

Refractories Howard Company New Haven Mullite Works Refractories Div. H. K. Porter Co., Inc. Shelton

Refrigeration

Dunham-Bush, Inc. West Hartford

Refrigeration Condensing Units

Brunner Division of Dunham-Bush, Inc.

West Hartford

Refrigeration Service Hartford Refrigeration Service, Inc. Hartford

Allied Control, Inc. Plantsville

HB Motion Picture Service equip.—all types) (audio-visual New Haven

Research and Development
Continental Engineering Corporation
Farmington
Laboratories (Elec-Raymond Engineering Laboratories (Elec-tro-Mechanical) Middletown Research & Development Designers, Inc. Middletown Sperry Products Co., Div. Howe Sound Co. (Ultrasonic) Danbury

Resistance Wire
C. O. Jeliff Mfg. Co., The (nickel chromium, copper nickel, Iron chromium, aluminum)
Southport Kanathal Corporation, The

Respirators American Optical Company, Safety Products

Retainers
Lacey Manufacturing Co., The (precision ball bearing)
Bridgeport

Rigid Plastic Sheet Material Gilman Brothers Company, The Gilman

Riveting Machines
Grant Mfg. & Machine Co., The Bridgeport
Linley Brothers Company Bridgeport
Patent Button Co., The (automatic) Waterbury Ripley Company, Inc.

H. P. Townsend Manufacturing Co., The
Elmwood

Rivets
Clark Brothers Bolt Co. Milldale
Dorset-Rex, Inc., Subsidiary of Landers,
Frary & Clark Machine Co., The Milford

Rivet Setting Machines Milford Rivet & Machine Co., The

Brass Company, The (copper, Waterbury American brass, bronze) Waterbur Bristol Brass Corp., The (brass and bronze Scovill Manufacturing Company (aluminum,

Rollers—Bituminous Paving Gabb Special Products Div. E. Horton & Son Company Windsor Locks

Rolled Shapes Cowles & Co., C. (and mouldings) New Haven

Rolling Mills & Equipment
Fenn Mfg. Co., The
Precision Methods & Machines, Inc.
Waterbury Waterbury Farrel Foundry & Machine Co., The, Division of Textron, Inc. Waterbury

Farrel-Birmingham Company, Inc (Chilled and Alloy Iron, Steel)

Rotary Files Atrax Company, The (carbide) Newington

Atrax Company, The (solid carbide)
Newington

Rubber Chemicals
Naugatuck Chemical Division United States
Rubber Co.
Stamford Rubber Supply Co., The ("Factice" Vulcanized Vegetable Oils) Stamford

Rubber Drug Sundries Scamless Rubber Company New Haven

Rubber Footwear Goodyear Rubber Co., The Middletown

Rubber Latex Compounds and Dispersions Naugatuck Chemical Division United States Rubber Co. (coating, impregnating and adhesive compounds) Naugatuck

Rubber Machinery Farrel-Birmingham Company, Inc. Ansonia

Rubber—Molded Specialties
Airex Rubber Prod. Corp. Portland
Associated Gaskets, Inc. Bridgeport
Bond Rubber Corporation
Wasley Products, Inc. Plainville Bridgeport Derby Plainville

Rubber Products Airex Rubber Prod. Corp. Portland

Rubber Printing Plates
ADS, Inc., Div. CSW Plastic Types, Inc. Hartford

Rubber Products—Mechanical Associated Gaskets, Inc. Bridgeport Auburn Mig. Co., The (washers, gaskets, molded parts) Middletown molded parts)

Rubber—Reclaimed Naugatuck Chemical Division United States Rubber Co. Naugatuck

Rubber Specialties Seamless Rubber Company New Haven

Rubberized Fabrics
Duro-Gloss Rubber Co., The New Haven

Rubbers
Naugatuck Chemical Div. U. S. Rubber Co.
(synthetic rubbers and latex) Naugatuck

Rust Preventives
Anderson Oil and Chemical Company, Inc.
Portland Enthone, Inc. New Haven

Rust Removers Enthone, Inc. New Haven

Saddlery
The Smith-Worthington Saddlery Co.
Hartford

Russell Mfg. Co. Safety Belts Middletown

Safety Clothing
American Optical Company Safety Products Putnan

Safety Fuses
Ensign-Bickford Co., The (mining & detoSimsbury

Safety Gloves and Mittens American Optical Company Safety Products Division Putnam

Safety Goggles

American Optical Company Safety Products

Sales Promotion Langeler-Stevens, Inc. Orange

Salvage Service
Walton Co., The (broken tools extracted)
West Hartford

Saw Blades—Hack Capewell Mfg. Co., The Hartford

Saw Blades—Hack & Band Capewell Manufacturing Company Hartford Thompson & Son Co., The Henry G. New Haven

Saws, Band, Metal Cutting
Atlantic Saw Mfg. Co. New Haven
Capewell Manufacturing Co., The Hartford

Saws—Hole Capewell Manufacturing Co., The Hartford Thompson & Son Co., The Henry G. New Haven

Nielson & Sons, Inc., John R. (graded hardwood and softwood) South Windsor

Acme Shear Company, The Bridgeport

Norlee Aluminum Prod. Corp. Bloomfield

Welmann Bros. Mfg. Co., The (small for

Screw Machines H. P. Townsend Mfg. Co., The Elmwood Screw Machine Products

Accurate Screw Machine Products, Inc. (B & S Swiss & Davenports) Southington American Standard Products, Inc. Hartford Apex Tool Co., Inc., The Bridgeport Auto Electric Screw Machine Co., Inc. Bridgeport Brown Manufacturing Co. (up to 1½" capacity) Consolidated Industries West Cheshire Eastern Machine Screw Corp., The

Brown Manuacus Ity)
(Consolidated Industries Corp., The Eastern Machine Screw Corp., The New Haven

One Products, Inc. Winsted Hartford Incl.

Consonoace treated and ground type only,

treated and ground type only,

Forestville

Independent Screw Company (up to and
incl. 1½" capacity) West Hartford

Junior Screw Machine Products, Inc.

West Haven

Lowe Mfg. Co., The Wethersfield Mailly Mfg. Co. (Swiss) Wolcott Main Screw Machine Products (davenport & automatics exclusively) Waterbury Mayflower Manufacturing Co. Unionville National Automatic Products Company, The Berlin

Nelson's Screw Machine Products Plantsville
New Haven Screw Machine Prods. Inc. (up
to 1½" capacity)
Newton Screw Machine Prods. Co. Plainville
Olson Brothers Company (up to ¾" capacity
Plainville
Olson & Song P. P. Olson Brotners

Ity)
Olson & Sons, R. P.
Products Design & Mfg. Corp
Products Design & Mfg. Corp
Newington
Newington
Waterbury
United Screw Machine Co.
Waterbury Machine Tools & Products Co.
(Brown & Sharpe and Davenport)
Waterbury
Waterbury
Waterbury
Waterbury
Meriden

Screw Machine Tools American Cam Company, Inc. (Circular Form Tools)

Cambridge Specialty Co., Inc. (flat & circular form tools)

Quaker Tool (H.S. cir. form tools)

Waterbury

Part & Whitney Co. Inc. (Power Tools)

Pratt & Whitney Co., Inc. (Reamers, Taps, Dies, Blades and Knurls) West Hartford

Allen Mfg. Co., The
American Screw Company
Atlantic Screw Works
Bristol Company, The (socket set and waterbury socket cap screws) Wat Clark Bros. Bolt Co., Inc. (cap and Milldale

Hartford Machine Screw Co. Div. of
Standard Screw Co. Hartford
Scovill Manufacturing Co. Waterbury
Superior Manufacturing Co., The
Torrington Co., The
Torrington Waterbury ne Winsted

Screws—Socket Allen Manufacturing Co., The Bristol Co. The Bristol Co. The Hartford Machine Screw Co. Div Standard Screw Co. Waterbury

Driscoll Wire Co., The (steel) Shelton

Screw Threads—Inserts
Heli-Coil Corp.
Danbury

Sealing Tape Machines
Better Packages, Inc. ("Counterboy,"
"Tape-Shooter," "Big Inch") Shelton
Derby Sealers, Inc. (gummed and pressuresensitive tapes)

Russell Mfg. Co. (for oven doors and fire Middletown bulkheads)

Sewing Machines
Greist Mfg. Co., The (Sewing Machine attachments) New Haven
Singer Manufacturing Co. The (Industrial)
Bridgeport

Sharpeners Gorn Electric Co., Inc. (electric knife and scissors)

Acme Shear Co., The (household) Bridgeport American Brass Co., The (brass and copper) Waterbury
Merriam Mfg. Co. (security boxes, fitted
tool boxes, tackle boxes, displays) Parsons Co., Inc., W. A. (fabricators)
Durham

Precision Sheet Metal Fabrication Div.
Bar-Plate Mfg. Co., Inc.
United Manufacturing Co. Div. of the W.
L. Maxson Corp.
Hamden

Sheet Metal Stampings
American Brass Co., The West Haven
Doo'val Tool & Mfg., Inc., The Naugatuck
Dorset-Rex, Inc., Subsidiary of Landers,
Frary & Clark Thomaston
Scovill Manufacturing Co. (aluminum,
brass, bronze, copper, nickel silver, steel
and other metals and alloys) Waterbury
Terryville Manufacturing Co. Terryville

Dolan Steel Co., Inc. Bridgeport

Victors Brass Foundry, Inc. Guilford

Victors Brass Foundry, Inc. Guilford

Shells Cly-Del Manufacturing Co. Waterbury Lakewood Metal Products, Inc. (all metals)
Waterbury
Salem Mfg. Co.
Prospect Salem Mfg. Co.

Scovill Manufacturing Co. (aluminum, brass, bronze, copper, nickel silver-drawn, stamped-electric socket, serew)

Waterbury

Terryville Terryville Manufacturing Co. Terryville Wolcott Tool and Manufacturing Co., Inc. Waterbury

Showcase Lighting Equipment nold Company, The Ha Wiremold Company, Hartford

Signals

II. C. Cook Co., The (for card files)

Signs
Ad-Craft Displays, Inc. (all types, quantity only)
Bloomfield
Leonard Sign Co. (neon & factory identi-

Silk Screen Plates—Supplies Seri-Print, Inc. Waterbury

Silk Screen Process Printing
Ad-Craft Displays, Inc.
Norton Co., R. H.
Seri-Print, Inc. (for aerosal and cosmetic containers)
Strocco Screen prints
Stifel & Kuffa, Inc.

Silk Screen Process Printing
Mow Haven
New Britain

Silk Screening on Metal Displays. Inc. Bloomfield Ad-Craft Displays, Inc. Bloomfield Merriam Mfg. Co. (Displays and Specialties to order) Durham

Silverware Wallingford Wallace Silversmiths, Inc.

Reflectone Electronics Inc. Stamford

Sintered Metal Products

American Sintering Div. of Engineered
Plastics, Inc. (Powder Metal Parts)
Watertown Raybestos Div. of Raybestos-Manhattan

Sizing and Finishing Compounds American Cyanamid Co. Waterbury

Slide Fasteners
G. E. Prentice Mfg. Co., The
Scovill Mfg. Co. (GRIPPER zipners)
Waterbury

Smoke Stacks Norwalk Tank Co. Div. Merslek Industries. South Norwalk

Snap Fasteners
Patent Button Co., The
Scovill Mfg. Co. (GRIPPER snan fastenWaterbury

Snapout and Continuous Forms Connecticut Printers, Inc. Hartford

Fuller Brush Co., The (personal, household and industrial) East Hartford

Socket Cap Screws Holo-Krome Screw Corp. West Hartford

Socket Pipe Plugs Holo-Krome Screw Corp. West Hartford

Socket Screw Keys Holo-Krome Screw Corp. West Hartford

Socket Set Screws Holo-Krome Screw Corp. West Hartford

Socket Shoulder Screws Holo-Krome Screw Corp. West Hartford

Sound Equipment Vinco Electronics Corp. New Haven

McMellon Bros., Inc. Bridgeport

Special Machinery Banthin Enginering Co. (complete and/or Banthin Enginerius
parts)
Farrel-Birmingham Co., Inc.
Federal Machine & Tool Co.
Fenn Mfg. Co., The
Hartford Special Machinery

Mfg. Co., The
Elimwood
Bridgeport
Elimeood
Reidgeport

H. P. Townsend Mfg. Co., The Ellimwood Lacey Mfg. Co., The Bridgeport National Sheradizing Machine Co. (man-drels & stock shells for rubber industry) New Haven Tucker Machine Co.

Special Machining Superior Steel Products Corp.

Special Parts
American Standard Products, Inc. Hartford
Custom Products Corp
Fenn Mfg. Co., The
Greist Mfg. Co., The (small machines, especially precision stampings) New Haven
Hartford Machine Screw Company Div.
of Standard Screw Co.
Torrington Co., The

J. C. Products, Inc. Higganum

Spline Milling Machines
Townsend Mfg. Co., The HP Elmwood

Seamless Rubber Co. New Haven

Spotwelding Spotwelders, Inc. (aluminum, nesium, titanium & alloys) steel, Stratford

Waterbury Companies, Inc. (for Lighter Fluids and Light Oils) Waterbury

Spray Painting
Stamford Polishing & Plating Corp. Stamford

Spray Painting Equipment & Supplies a Manufacturing Co., The Waterbury

Spring Coiling Machines
Torrington Mfg. Co., The Torrington

Spring Presses
Townsend Mfg. Co., The H. P. Elmwood

Spring Units
Owen Silent Spring Div, American Chain
& Cable Company, Inc. Bridgeport

Spring Washers The Wallace Div. Associated Barnes Co., The Wallace Div. Associated Spring Corp. Bristol Terryville Manufacturing Co. Terryville

Springs
CE-JA Springs, Inc. (coll & torsion)
Newington

Springs—Util & Fish

Barnes Co., The Wallace Div. Associated

Spring Corp.
Barrett Co., William L.
Bristol Bristol
Bristol Spring Mfg. Co.
Foursome Mfg. Co.
Newcomb Spring Corn., The
New England Spring Mfg. Co.
Peck Spring Co., The
Stanley Humason, Inc.

Sanda Pring History
Bristol
Bristol Springs—Coil & Flat ... The Wallace Div. Associated

Springs—Flat

Atlantic Precision Spring Co.
Barnes Co., The Wallace Div. Associated
Spring Corp.
Bristol Spring Mfg. Co.
Foursome Manufacturing Co.
Stanley Humason, Inc.
New England Spring Mfg. Co.
Peck Spring Co.

Springs—Flat
Atlantic Precision Spring Co.
Foursome Manufacturing Co.
Foursome Manufacturing Co.
Foursome Manufacturing Co.
Flainville Plainville

Springs—Wire
Banner Spring Corporation
Barnes Co., The Wallace Div. Associated
Spring Corp.
Bernston Co., J. W.
Bernston Spring Mfg. Co.
Colonial Spring Mfg. Co.
Connecticut Spring Corp., The
Sion, extension, torsion)
Foursome Manufacturing Co.
Stanley Humason, Inc.
Stanley Humason, Inc.
Newcomb Spring Corp., The Southington
New England Spring Mfg. Co.
Peck Spring Co.
D. R. Templeman Co. (coll and torsion)
Plainville

Everett Co., Inc. (coil and torsion)
New Britain
Terryville

Springs, Wire & Flat
Plainville Peck Spring Co.

Stabilizers
Kenyon Laboratories, Inc. (Gyro)
Deep River

Stamped Metal Products
American Brass Co., The Waterbury

Stampings
Doo'Val Tool & Mfg., Inc., The Naugatuck
Dorset-Rex, Inc., Subsidiary of Landers,
Frary & Clark Thomaston
Laminated Shim Co., Inc.
Foursome Manufacturing Co.
Lacey Mfg. Co., The (precision sheet
metal)

Bridgenort

Bridgenort

Bridgenort

Bridgenort Foursome Manuacturing Co.
Lacey Mg. Co., The (precision sheet
metal) Bridgeport
Prentice Mfg. Co., The G. E. Kensington
Scovill Mfg. Co. (aluminum, brass, bronze,
copper, nickel silver, steel and other
metals and alloys—automotive, electrical,
radio, etc.—deep drawn, enameled)
Waterbury

Waterbury Stanley Pressed Metal New Britain

Stampings—Small
Barnes Co., The Wallace Div. Associated
Spring Corp. Bristol
Barrett Co., William L.
Bristol Spring Mfg. Co.
Greist Mfg. Co., The
Laminated Shim Company, Inc.
Stanley Humason, Inc.
Waterbury Companies, Inc.
Wire Form. Inc.
Wire Form. Inc.
Waterbury Pressed Metal Co.
Waterbury

Hoggson & Pettis Mfg. Co., The (steel)
New Haven
Parker-Hartford Corp. (steel)
Schwab & Company (steel)
Bridgeport

Stamped Assemblies
Cowles & Co., C. New Haven

American Brass Co., The Waterbury

Steam Turbines
Whiton Machine Co. New London

Malleable Iron Fittings Co.
New England Alloy Casting Corp. (carbon, low alloy and stainless steel castings)
Hartford Nutmeg Crucible Steel Co.

Steel—Cold Rolled Spring
Barnes Co., The Wallace Div. Associated
Spring Corp. Bristol
Detroit Steel Corporation Hamden

Steel—Cold Rolled Stainless Seymour Mfg. Co., The S. Ulbrich Stainless Steels Wallingford Steel Company Wall Sevmour Wallingford Wallingford

Steel—Cold Rolled Strip
Feroleto Steel Co., Inc. Bridgeport
Detroit Steel Corporation Hamden

Steel—Cold Rolled Strip and Sheets Wallingford Steel Company Wallingford

Steel Flanges
Ideal Forging Corp. (stainless)
Southington

Steel Goods
Merriam Mfg. Co. (sheets products to Durham

Steel-Ground Flat Stock Thompson & Son Co., The Henry G. New Haven

Steel Rolling Rules
Waterbury Lock & Specialty Co., The
Milford

Steel-Stainless Alloy and Carbon Frasse & Co., Inc., Peter A. Hartford

Steel Stamps Cooney Engraving Co. Branford

New Haven Electrotype Div. Electro graphic Corp. New Haven

Stop Clocks, Electric H. C. Thompson Clock Co., The Bristol

Storage Batteries
R. A. E. Storage Battery Mfg. Co.
Glastonbury

Straps, Leather
Auburn Mfg. Co., The (textile, industrial, skate, carriage) Middletown

Strip Steel
Detroit Steel Corp.
Dolan Steel Company, Inc. New Haven Bridgeport

Leed Co., The H. A. Hamden

Waterbury Mattress Co. Waterbury

Super Refractories

Mullite Works Refractories Div. H. K.
Porter Co., Inc. Shelto Shelton

Surface Metal Raceway & Fittings Wiremold Company, The Hartford

Surgical Dressings
Acme Cotton Products Co., Inc.
East Killingly

Feun Mfg. Co., The Newington Torrington Co., The Torrington Waterbury Farrel Foundry & Machinery Co., The, Div. of Textron, Inc. Waterbury

Sweeping Compounds
Nielson & Sons, Inc., John R.
South Windsor

Switches
Allied Control Co., Inc. (subminiature, toggle & pushbutton) Plantsville

Switchboards Wire and Cables Rockbestos Wire & Cable Co. Div. Cerro de Pasco Corp. (asbestos insulated) New Haven

Tableware—Stainless Steel
Wallace Silversmiths, Inc. Wallingford

Tableware—Sterling Silver Wallace Silversmiths, Inc. Wallingford

Tabulating Equipment—Manual
Denominator Company, Inc.
Woodbury
Veeder-Root, Incorporated Hartford

Alsop Engineering Co.
Bigelow Co., The (steel) New Haven
Connecticut Welders, Inc. (steel, alloy &
Ined) Wallingford
Enthone, Inc.
Norwalk Tank Co. Div. Mersick Industries,
Inc.
South Norwalk
Fairfield Inc.
Rolock, Inc. (Alloy)
Storts Welding Co. (steel and alloy)
Meriden

Tape
Russell Mfg. Co. (Glass Electrical Insulating Tapes, Glass Fabrics for Plastic Moulding)
Middletown

Tape Machines

Better Packages, Inc. (Manual and electric models for case taping)

Shelton Derby Sealers, Inc. (manual and electric models)

Hanson-Whitney Co., The Hartford Pratt & Whitney Co., Inc. West Hartford

Tap, Drill & Stud Bemoval Walton Co., The West Hartford

Walton Co., The (and extensions)
West Hartford

Tarred Lines Brownell & Co., Inc.

Technical Writing Stratford Watson-Manning Advertising

Bristol Co., The Waterbury

Television—Radio
Junior Screw Machine Products, Inc.
West Haven

Temperature Controllers
Electronic Controls, Inc. Stamford

Terminals Waterbury Companies, Inc.
Testers—Insulation Wire & Cable
Davis Electric Company Wallingford

Testers-Nondestructive, Ultrasonic Branson Instrument, Inc. Stamford Sperry Products Co., Div. of Howe Sound Co. (Ultrasonic, X-ray and magnetic particle) Danbury

Testing American Metaseal, Inc. (pressure) Hamden

Testing Services
Sperry Products Co., Div. of Howe Sound Co.
(Uitrasonic, X-ray and magnetic particle)
Danbury Metals Testing Co., Inc. (Certified Non-Destructive—Magnaflux, Zyglo) East Hartford

Textile Printing Gums
Inc. Springdale Polymer Industries, Inc.

Textile Processors Amerbelle Corporation Rockville

Thermometers Bristol Co., The (recording and automatic control)
Manning Maxwell & Moore, Inc.

Thin Gauge Metals Plume & Atwood Mfg. Co., The Thomaston Thinsheet Metals Co., The (plain or tinned in rolls) Waterbury

Thread American Thread Co., The Belding Heminway Corticelli Willimantic Putnam

Threading
Products Design & Mfg. Corp. Newington

Geometric Tool Div., Greenfield Tap & New Haven

Thread Gages
Hanson-Whitney Co., The Hartford
Pratt & Whitney Co., Inc. West Hartford

Thread Milling McMellon Bros. Inc. Bridgeport

Pratt & Whitney Co., Inc. West Hartford

Thread Repair Kits Hell-Coll Corp. Danbury

Thread Rolling Machinery
Hartford Special Machinery Co. (flat die)
Hartford
Wachten Shuster Wire Machine Div, Mettler Machine Tool. Inc. New Haven Waterbury Farrel Foundry & Machine Co., The, Div, of Textron, Inc. Waterbury

Threading Machines
Grant Mfg. & Machine Co., The (double end automatic)

Bridgeport

A. W. Haydon Co., The H. C. Thompson Clock Co., The Bristol Cramer Controls Corp., The Centerbrook Rhodes, Inc., M. H.

Timing Devices
B & N Tool & Engineering Co. (development and model work)
Cramer Controls Corp., The A. W. Haydon Co., The Lux Clock Mfg. Co. Waterbury Rhodes, Inc., M. H.
United States Time Corp., The Waterbury

Timing Devices & Time Switches
W. Haydon Co., The
Waterbury
Ix Clock Mfg. Co.
H. Rhodes, Inc.
Hartford A. W. Haydon Lux Clock Mf M. H. Rhodes,

Thinsheet Metals Co., The metals in rolls) Waterbury Wilcox-Crittenden Div. North & Judd Mfg.

Tissue
Sanitary Paper Mills, Inc. (Dovalettes facial, bathroom and handkerchiefs)
East Hartford

Armstrong Rubber Co., The West Haven

Toiletries Chesebrough-Pond's, Inc. Clinton

Vanderman Mfg. Co., The Willimantie

Tool Hardening Commercial Metal Treating Co. Bridgeport

Tools

B & N Tool & Engineering Co. (dies, jigs, fixtures, sub-press and progressive)

Thomaston thougson & Pettis Mfg. Co., The (rubber workers) 141 Brewery St. New Haven

Tool Designers
Crescent Tool & Design (tools
& special machinery) Glastonbury
Research & Development Designers, Inc.
Middletown

Tools & Dies
Metropolitan Tool & Die
Lacey Mfg. Co., The
Moore Special Tool Co. Hartford Bridgeport Bridgeport

Tools, Dies & Fixtures Greist Mfg. Co., The New Haven

Tools, Dies, Jigs & Fixtures
Fairfield Tool Co., Inc., The Bridgeport
Lyons Tool & Die (modelwork, Jig boring)
Meriden Otterbein Co., J. A.
RSV Engineering Co. (gages)
Telke Tool & Die Mfg. Co.
Middletown
Wethersfield
Kensington

Tools, Fixtures, Gauges Fredericks Tool Co., J. F. West Hartford

Totalizers Reflectone Electronics, Inc. Stamford

Geo. S. Scott Mfg. Co., The Gilbert Co., The A. C. New Haren Gong Bell Mfg. Co. East Hampton N. N. Hill Brass Co., The East Hampton Terryville Mfg. Co. (stampings for)

Molding Corp. Wallingford Waterbury U. S. Plastic Molding Corp. Waterbury Companies, Inc.

Automatic Signal Div. Eastern Industries, Norwalk

Trucks—Commercial

Metropolian Body Company (International
Harvester Truck chassis and "Metro"
bodies)

Bridgeport

Excelsior Hardware Co., The Stamford
Trucks—Skid Platforms
Excelsior Hardward Co., The (lift) Stamford

Weimann Bros. Mfg. Co., The (for collapsible tubes)

Tube Fittings
Scovill Manufacturing Co. (UNIFLARE flared tube and LOXIT compression Waterbury

Tubers
Standard Machinery and Davis-Standard
Divisions of Franklin Research Corp.
Mystic

Tubes—Collapsible Metal Sheffield Tube Corp., The New London

Tubing
American Brass Co., The (brass & copper)
Waterbury G & O Manufacturing Co. (finned)
New Haven G & O Manufacturing

New Hard

Scovill Mfg, Co. (Brass and Copper)

Waterbury

The (stainless and super metals)

Tubing—Carbon and Stainless Steel Frasse & Co., Inc., Peter A. Hartford

Tubing—Flexible Metallic American Brass Co., Metal Hose Branch Waterbury

Tubing—Heat Exchanger
American Brass Co., The Waterbury
Scovill Mfg. Co. Waterbury

Tumbling Barrels and Accessories Nielsen & Sons, Inc., John R. South Windsor

Tumbling Equipment and Supplies Esbec Barrel Finishing Corp. By Byram

Tumbling Service Esbec Barrel Finishing Corp, Meriden

Turntables Macton Machinery Co., Inc. (industrial & display) Stamford

Royal McBee Corp. Underwood Corporation Hartford

Typewriter Ribbons and Supplies Royal McBee Corp. Hart Hartford and Bridgeport

Underclearer Rolls
Sonoco Products Co. (Climax-Lowell Div.)
Mystic

Magson Uniform Co. Kensington

Utrasonic Equipment
Harris Transducer Corp., Sub. of General
Instrument Corp.
Branson Ultrasonic Corp.
Stamford

Underwater Equipment Seamless Rubber Co. New Haven

Universal Joints
Grav and Prior Machine Co. (for Hartford

Vacuum Bottles and Containers American Thermos Products Co. Norwich

Vacuum Cleaners Electrolux Corp. Spencer Turbine Co., The Old Greenwich Hartford

Illuminized Finish Co. Cromwell

Aluminized Finish & Mfg. Co. Cromwell

Valves Jenkins Bros, Rockwell Co., W. S. (Butterfly) Bridgeport Fairfield

Bridgeport Thermostat Div. Fulton Controls Co. Skinner Precision Industries, Skinner Electric Valve Div. New Britain

Valves—Relief & Control Beaton & Caldwell Mfg. Co. New Britain

Valves—Safety & Relief Manning Maxwell & Moore, Inc. Stratford

Valves—Solenoid
Allied Control Co., Inc.
Skinner Precision Industries, Inc.,
Skinner Electric Valve Div. New Britain

Vanity Boxes
Bridgeport Metal Goods Mfg. Co. Bridgenort Dorset-Rex, Inc., Subsidiary
Frary & Clark
Scovill Mfg. Co.

Bridgeport
of Landers,
Thomaston
Waterbury

Velvets

American Velvet Co. (owned and operated by A. Wimpfheimer & Bros., Inc.) Stonington Leiss Velvet Mfg. Co., Inc., The Willimantic

Venetian Blinds

Findell Mfg. Co.
Jennings Co., The S. Barry

Manchester
New Haven

Ventilating Systems

Colonial Blower Co. Plainville

Vibration Detection Equipment Advanced Electronics, Inc. Rocky Hill

Vibrators-Pneumatic

Branford Co., The (industrial) New Britain Vinyl Extrusion & Moulding Compounds Electronic Rubber Co. Stamford

Vise Fixtures

Dery & Sons Tool & Die Co., A. L. Pine Meadow

Dery & Sons Tool & Die Co., A. L. (gang with loading trays) Pine Meadow

Vises

Fenn Manufacturing Co., The (Quick-Action Vises)
Skinner Precision Industries, Inc.,
Skinner-Horton Chuck Div. New Britain
Vanderman Mfg. Co., The (Combination
Bench Pipe) Willimantic

Wall Paper

Stamford Wall Paper Co., Inc. Stamford

American Felt Co. (felt)
Auburn Mfg. Co., The (all materials)
Middletown
Unionville Fabricon Corp. Middletow Unionvil Terryville Mfg. Co. (Made to order—all metals) Terryville

Washers-Felt

Chas. W. House & Sons, Inc. (Mills & Uniouvil Unionville

Watches

E. Ingraham Co., The Bristol United States Time Corp., The Waterbury

Washers-Precision

Laminated Shim Company, Inc. Glenbrook

Water Deionizers

Penfield Mfg. Co. Meriden

Water Heaters

Whitlock Mfg. Co., The (instantaneous & storage) Hartford

Water Heaters-Electric

Bauer & Company, Inc. Hartford

Waxes

Fuller Brush Co., The (liquid and paste for floor and furniture) East Hartford Harrison Company, The A. S. (and other protective coatings) South Norwalk

Webbing

Russell Mfg. Co. (Webbing for Safety Seat Belts—all types of webbing) Middletown

Welding

Aircraft Welding & Mfg. Co., Inc. (aluminum. stainless steel, magnesium)
Hartford
Connecticut Welders, Inc. (fabrication & runsless)

repairs)
Industrial Welding Co. (Equipment Manufacturers—Steel Fabricators)
Hartford
Storts Welding Company (tanks, coils & fabrication)
Meriden Storts Weiting Meriden fabrication)
Tag Alloy Welding & Mfg. Co., Inc. (nu-clear, missile and aircraft type)
Glastonbury

Welding—Lead
Connecticut Welders, Inc. (tanks & coils)
Wallingford
Lead Products, Inc. (tanks & fabrication)
Manchester Storts Welding Company (tanks, colls & Meriden

Welding—Lead Bricks Lead Products, Inc. Manchester

Welding Rods
American Brass Co., The
Bristol Brass Co., The (brass & bronze)
Bristol

Welding Solder Lead Products, Inc. (wire, bar and cakes and babbits) Manchester

Church Co., The Stephen B. S Wheel Dressers—Dlamonds Russell, Inc., R. R. Nev Seymour Newington

Auburn Mfg. Co., Wicks The (felt, asbestos) Middletown Holyoke Heater Corp. of Conn., Inc. Hartford

Smith Co., The John P. Ne New Haven

American Brass Co., The Waterbury Atlantic Wire Co., The (steel) Branford Bartiett Hair Spring Wire Co., The North Haven Bristol Brass Corp., The (brass & bronze) Bristol Bristol Brass Corp., The (steel)

Bristol Briscoll Wire Co., The (steel)

Bristol Shelton Indson Wire Co., Winsted Div. (insulated & enameled magnet)

Montgomery Company, The (fine copper, OFHC, cadmium, aluminum, tin or silver coated)

Platt Bros. & Co., The (sine and zine alloy wires)

Scovill Mfg. Co. (Brass, Bronze and Nickel Silver). Silver)
Viking Wire Co., Inc. (enameled magnet)
Danbury

Wire and Cable
Continental Wire Corp. (for industrial and military applications) Wallingford General Electric Company (for residential, commercial and industrial applications) Rockbestos Wire & Cable Co. Div. Cerro de Pasco Corp. (all asbestos, mining, shipboard and appliance applications)

New Haven

Wire Baskets

Rolock, Inc.
Wiretex Mfg. Inc. (Industrial, for acid, heat, treating and degreasing)
Bridgeport

Wire & Cable—High Temperature Lewis Engineering Co., The Naugatuck

Wire Cloth
C. O. Jeliff Mfg. Co., The (all metals, all Southport meshes)

McCluskey Wire Co., Inc. (Fourdrinier) Pequot Wire Cloth Co., Inc. (industrial grades only)
Rolock, Inc. (alloy)
Smith Co., The John P. Fairfield

John P. Smith Co., The New Haven

Wire Forming Machinery
Nilson Machine Co., The A. H. Shelton
Torrington Mfg. Co., The Torrington

Wire Formings
Master Engineering Co. West Cheshire
North & Judd Mfg. Co. New Britain
Oakville Co. Div. Scovili Mfg. Co. Oakville
Peck Spring Co.
Turner & Seymour Mfg. Co., The
Torrington

Atlantic Precision Spring Co.
Banner Spring Corp.
Barnes Co., The Wallace Div.
Spring Corp.
Bristol Spring Mfg. Co.
Colonial Spring Corporation, The Hartford
Connecticut Spring Corporation on The Hartford
Connecticut Spring Corporation on The Hartford
Foursome Manufacturing Co.
Gemeo Mfg. Co., Inc.
Southington
Stanley Humason, Inc.
Forestville
Fore England Spring Mfg. Co.
Unionville
Company Spring Mfg. Co.
Unionville Gemeo Mig. Co., 1 Stanley Humason, Inc. New England Spring Mfg. Co. Peck Spring Co. Templeman Co., D. R. Terryville Mfg. Co. Wire Form, Inc. Forestville Unionville Plainville Plainville Terryville Milldale

Wire Goods

American Buckle Co., The (overall trim-mings)
Scovill Mfg. Co. (to order) Waterbury mings) Scovill Mfg. Co. (to order)

Wire Partitions

John P. Smith Co., The New Haven Torrington

Wire Products

Artistic Wire Products, Inc. Stanley Humanson, Inc. Peck Spring Co. J. C. Products, Inc. Taftsville Forestville Plainville Higganum

Wire Reels

Nilson Machine Co., The A. H. Shelton Shuster Wire Machine Div. Mettler Ma-chine Tool, Inc. New Haven Waterbury Farrel Foundry & Machine Co., The, Div. of Textron, Inc. Waterbury

American Buckle Co., The and tinners' trimmings) Stanley Humason, Inc.
Peck Spring Co.
Templeman Co., D. R.

Wire—Specialties
Andrew B. Hendryx Co., The New Haven

Wire Springs Carlson Spring Co. (Torsion, Compression, Extension)

Wire Straightening & Cutting Machinery Shuster Wire Machine Div. Mettler Ma-chine Tool, Inc. New Haven

Wiring Devices Harvey Hubbell, Inc. Bridgeport

Wood Scrapers Fletcher-Terry Co., The Forestville

C. H. Dresser & Sons, Inc. (Mfg. all kinds of woodwork) Hartford Builders Finish Co. Hartford

Chas. W. House & Sons, Inc. (Mills & Unionville

X-ray—Industrial Bridgeport Testing Laboratory, Inc. Bridgeport

Yarns
Aldon Spinning Mills Corp., The (fine-woolen and specialty) Talcotville
Ensign-Bickford Co., The (jute-carpet)
Simsbury

Platt Bros. & Co., The (ribbon, strip and wire) P. O. Box 1030 Waterbury

Zinc Castings
Mosman Co., Charles H.
Newton-New Haven Co., Inc.
Westbrook
West Haven

Zinc Die Castings
Mt. Vernon Die Castings Corp. Stamford
Peasley Products, Inc. Stratford
Stewart Die Casting Div. Stewart-Warner Bridgeport

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#### **Business Pattern**

(Continued from Page 39)

#### Connecticut Sales Tax

Reflecting softness in retail sales, third quarter Connecticut sales tax revenue continued the decline which had begun in the preceding period. Seasonally adjusted tax receipts went down to \$19.8 million. While this was 3% lower than the first quarter record, it was higher than the same period of last year and the earlier peak of the first quarter of 1957.

Retail sales for the nation as a whole also showed third quarter weakness. From a peak of \$18.9 billion in April, total retail sales decreased to \$18.1 billion, seasonally adjusted, in September. A drop in durable goods sales was chiefly responsible.

October and November sales were better, hitting almost \$18.6 billion in each month. However, it appears that sales will drop in December.

#### Personal Income

Total personal income, which had been growing at a slower rate in recent months, leveled off in November at \$409.5 billion. Factory payrolls went down for the sixth consecutive month, dropping \$0.7 billion. This was offset, however, by increases in trade, service and government payrolls and record unemployment and social security payments.

Disposable personal income, the income available to individuals after they pay taxes, also increased at a slow rate in the third quarter. Personal consumption expenditures decreased slightly due principally to a cutback in consumer spending for autos and other durable goods. The drop in consumption expenditures combined with the rise in disposable income caused personal saving, the difference between them, to increase sharply.

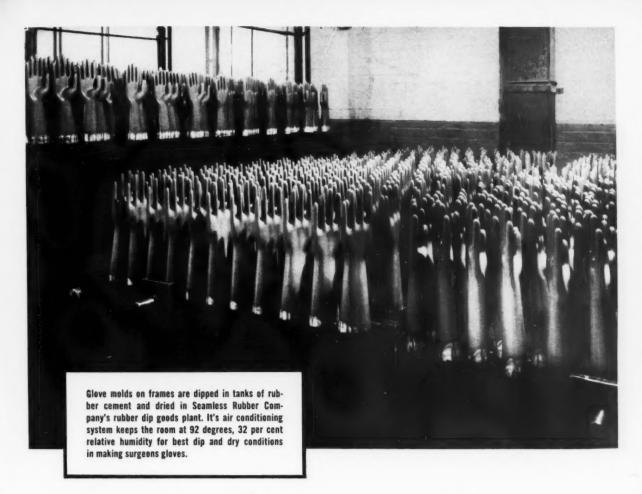
#### Inventories and Sales

Changes in inventories have an important effect on business conditions because they tend to amplify fluctuations in total output.

In the second half of the year, manufacturers have succeeded in checking the eight month rise in their stocks, cutting them from the June high of \$55.1 billion to \$54.3 billion in October. Manufacturers' sales have slipped from their February peak of \$31.6 billion and were down to \$29.6 billion in October. As a result of this and the recent trend of inventories, the inventory-sales ratio has increased slowly. It is not high, though, in comparison to the 1957-58 experience.

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## Making Surgeons Gloves A JOB FOR AIR CONDITIONING

Manufacturing surgeons gloves at The Seamless Rubber Company of New Haven is a highly specialized and exacting job. The gloves, to give surgeons the "right feel," have a gauge of 10 thousandths of an inch. They must be perfect—and they are.

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